PB-216 235

AIR POLLUTION MEASUREMENTS OF THE NATIONAL AIR SAMPLING NETWORK. ANALYSIS OF SUSPENDED PARTICULATE SAMPLES COLLECTED 1953-1957

Robert A. Taft Sanitary Engineering Center
Cincinnati, Ohio

1958

DISTRIBUTED BY:

NTIS
National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

PB 216 235

air pollution measurements of the national air sampling network

analyses of suspended particulates

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
U S Department of Commerce
Springfield VA 22151

Details of illustrations in
this document may be better
studied on microfiche

1953-1957

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

AIR POLLUTION MEASUREMENTS
# of the
NATIONAL AIR SAMPLING NETWORK

ANALYSIS OF SUSPENDED PARTICULATE SAMPLES COLLECTED 1953-1957

Details of illustrations in
this document may be better
studied on microfiche

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Bureau of State Services
Division of Sanitary Engineering Services

Robert A. Taft Sanitary Engineering Center
Cincinnati 26, O.
1958

Public Health Service Publication No. 637

AIR POLLUTION MEASUREMENTS OF THE NATIONAL AIR SAMPLING NETWORK

Errata

Page 1	Col. 2	line 5	for "frequqency" read "frequency"
Page 2	Col. 1	line 6	delete "," between soluble and organic
Page 2	Col. 2	line 8	for "conceptions" read "exceptions"
Page 8		Table B	delete line between 8 and 9 and insert line between 9 and 10
Page 14			at end of Table D insert "Note: For explanation on use of asterisks, see paragraph immediately below"
Page 245	Col. 1	Title	for "LOG-NORMALLY" read "LOG-NORMALITY"
Page 245		Table F	for Urban under Number of Samples - for "9410" read "9508"
Page 246		Table G	for Minimum under Daily - for "68" read "66"
Page 246	Col. 2	line 9	for "Simiarly" read "Similarly"
Page 248	Col. 2	line 45	for "TI" read "Tl"
Page 250	Col. 1	line 4	for "TI" read "Tl"
Page 251	Col. 2	line 4	for "city" read "sity" for "filass" read "glass"
Page 252	Col. 1	line 29	for "Asenic" read "Arsenic"
Page 253	Col. 1	line 13	for "agent" read "against"

AIR POLLUTION MEASUREMENTS OF THE NATIONAL AIR SAMPLING NETWORK

Errata Sheet No. 2

Correct values listed below should be inserted in the proper tables.

				Frequency Distribution								
Page	Station	Min.	Av.	10	20	30	40	50	60	70	80	90
25	Alaska Total	22	269	57	76	112	145	183	236	289	366	513
42	Alaska Total	39	251	110	132	154	171	191	213	277		
53	Alaska Total	35	126	45	51	73	84	104	125	135	155	243
53	Ohio Total		119			67	81	97	118	142	172	217
71	Alaska Total		8		1	1	2	3	4	8	11	17

Page	Station	Site	Years	No.	Max.	Av.	70	80	90
23	Boise, Idaho			26					
25	Idaho Total			26					
25	New Jersey Total							195	245
25	W. Virginia Total							385	
42	Oregon Total								971
52	Boise, Idaho			26					
53	Idaho Total			26					
53	Ohio Total			270	545				
54	Rocky Mtn. Total			245					
54	Grand Total			6576					
100	Grand Total				480				
165	Mid-Atlantic Total						8		17
176	Cincinnati	1	55	27	62	15			
		1	54-55	95	114	17			
			55	27	62	15			
			54-55		232	15			
178	Ohio Total				232	23			
178	Mid-West Total				264	20			
178	Grand Total				386				
204	Everett, Mass.				800	47			
207	Mass. Total				800	26			
207	New England Total				800	17			
207	Grand Total				800				
							- - -	- - -	- - -
239	Grand Total - Table 27			620	141				
240	Grand Total - Table 27			82					
241	Grand Total - Table 28			1991			1878	< MDQ	
241	Grand Total - Table 29				20				
242	Grand Total - Table 29						60	< MDQ	
243	Grand Total - Table 30				16		1215	< MDQ	

Page		Jan.	Feb.	Mar.
35	Boise, Idaho - No. of samples	3	2	2
63	Boise, Idaho - No. of samples	3	2	2

181	Cincinnati, Ohio	Nov.
	No. of samples	3
	Max.	36
	Av.	24
	Min.	6

209	Everett, Mass.	Feb.
	Max.	800
	Av.	271

14 Table E Vanadium $\mu \times 10^{-3}$ 51 .051 .001

222-230 Table 24 Micrograms per cubic meter $\times 10^{-3}$

PREFACE

This report on the first five years of operation of the U. S. Public Health Service's National Air Sampling Network has been designed to present basic data on suspended particulate matter in the air over the United States. Much of its content consists of tables which present this information.

It is not intended that this should be the final form of presentation. Planning is currently under way for the comprehensive analysis of these raw data with the aim of determining trends and patterns of air pollution in the United States.

The various text sections reflect the second purpose of this report: to provide the technical information necessary for the establishment of similar or identical sampling stations in community, area, or State Networks throughout the United States by appropriate agencies. For this reason, data concerning the statistical and chemical procedures used in the Network have been presented in greater detail than probably would have been necessary for an evaluation of the results.

Another major goal is the presentation of non-technical information to assist the public-spirited citizen in broadening his understanding of this relatively new environmental problem. A summary report on the Network which would partially meet this need is under consideration.

CONTENTS

Page

Preface iii

THE NATIONAL AIR SAMPLING NETWORK 1
- Historical Background 1
- Current Operations 2
- Atmospheric Pollutants Measured 5
- Selection of Station Locations 6
- Sampling Equipment and Procedure 6
- Sample Scheduling 7
- Explanation of Data Tabulations 8
- Sampling Site Descriptions and Participating Organizations 10
- How to Find Data from a Particular City or State 14
- Explanation of Units Used in Data Tables 14

DATA TABLES 15
- 1. Suspended Particulate Matter 17
- 2. Acetone Soluble Organic Matter 39
- 3. Benzene Soluble Organic Matter 47
- 4. Radioactivity 67
- 5. Chlorides 86
- 6. Fluorides 93
- 7. Nitrates 97
- 8. Sulfates 107
- 9. Barium 117
- 10. Bismuth 124
- 11. Cadmium 130
- 12. Chromium 137
- 13. Copper 144
- 14. Iron 153
- 15. Lead 162
- 16. Magnesium 171
- 17. Manganese 175
- 18. Nickel 184
- 19. Potassium 192
- 20. Sodium 200
- 21. Strontium 200
- 22. Tin 204
- 23. Titanium 213
- 24. Vanadium 222
- 25. Zinc 231
- 26. Silver 239
- 27. Arsenic 239
- 28. Beryllium 241
- 29. Cobalt 241
- 30. Molybdenum 243
- 31. Antimony 243

STATISTICAL INTERPRETATIONS 245
- Log-normality of Frequency Distributions 245
- Comparison of Daily, Weekly, and Biweekly Random Sampling Schedules 246

Page

ANALYTICAL METHODS 249
- Samples 249
- Radioactivity 249
- Organic Materials 251
- Inorganic Constituents 251

A COMPARISON 255

ACKNOWLEDGMENTS 257

REFERENCES 259

TEXT TABLES

- A. National Air Sampling Network 3
- B. Reference Table for Determining Day and Hour for Starting Sampler 8
- C. Worksheet for Preparation of Random Sampling Schedule 8
- D. Sampling Site Descriptions and Participating Organizations 10
- E. Units Used in Data Tables 14
- F. National Totals 1953-1957 245
- G. Comparative Statistics for Daily, Weekly, and Random Sampling 246
- H. Comparative Statistics for Daily and Random Sampling 247

FIGURES

- 1. 1953 National Air Sampling Network 1
- 2. 1954 National Air Sampling Network 2
- 3. 1955 National Air Sampling Network 2
- 4. 1956 National Air Sampling Network 2
- 5. Current Network 2
- 6. Current Network—Northeast 3
- 7. Sampler 6
- 8. Horizontal Shelter 7
- 9. Vertical Shelter and Typical Site 7
- 10. Filter and Mailing Container 7
- 11. Cumulative Frequency Distribution — Suspended Particulate Matter, All Urban and Nonurban Stations, 1953-1957 245
- 12. Cumulative Frequency Distribution — Suspended Particulate Matter, Philadelphia, Pa., Site 1, 1956 246
- 13. Cumulative Frequency Distribution — Suspended Particulate Matter, Philadelphia, Pa., Site 1, 1955-1956 247
- 14. Division of Sample for Analysis 249

Preceding page blank

THE NATIONAL AIR SAMPLING NETWORK

Conspicuous effects of air pollution in many areas have shown the need for treating the atmosphere as a limited natural resource. Since air is the first requirement for human existence, it is obvious that it should be clean and healthful. To assure that it is, it must be examined routinely for substances suspected of exerting adverse influences on its quality. This is necessary for the intelligent application of measures designed to effect adequate pollution control.

The National Air Sampling Network is a start toward meeting this need for routine air quality measurement. In addition to assembling basic data on the nature and extent of air pollution throughout the nation, the existing program has been designed to detect trends in levels of pollution with respect to time, geographical location, topography, population density, climate, industrial activity, meteorological conditions, and other factors associated with air quality. Other objectives are to collect data that may have value in epidemiological studies and to provide the basic data necessary for intelligent public consideration of air pollution problems.

Measurements of the type presented here were very sparse prior to this decade. Up at that time, the more common method of trapping particles for measurement and analysis was to expose an open-topped jar or can for about a month and catch the "fallout." The principle involved is the same as that now used to trap radioactive "fallout" on exposed sticky paper. These fallout receptacles trapped mainly the larger particles that were the common affliction of cities during the first half of this century. Although these particles continue to be a nuisance, they are too heavy to travel far from their source, to be inhaled, or to influence visibility. Due to changes in fuel burning methods, these heavy particles will most likely be of much less concern during the last half of the century. Current research interest, therefore, is in the direction of particulate matter that will remain suspended for long periods of time and which includes particles small enough to reach the lungs when inhaled.

The work presented in this report started in 1953. The Federal Air Pollution Research and Technical Assistance Act (Public Law 159, 84th Congress) under which this program is currently being carried on became effective in June 1955, but the Network did not become truly "national" until January 1, 1957.

In this report are tabulations of data from analyses of atmospheric particulate samples collected during 1953-57. The samples were obtained in urban, suburban and nonurban areas. Determinations were made for the amount of particulate matter present, organic materials, a large number of inorganic constituents, and radioactivity. Laboratory procedures for all analytical work are described.

Because of the great number of samples collected, it has been considered impractical to present results of individual analyses. In lieu of this, the data have been tabulated as minimum, maximum, and average values for samples obtained at each sampling site. Monthly distributions and percentile frequqency distributions for all substances are also presented.

Tabulations were prepared using electronic data processing equipment. A computer program, designed specifically for assembling the data presented, was used in the preparation of all tables (1,2). A portion of the report is devoted to the organization and explanation of tabulated material.

The history, scope, and general operating features of the National Air Sampling Network are discussed in later sections of the report. Site descriptions and participating organizations are listed for sampling points appearing in the tabulations. Maps indicating station locations depict Network development with respect to area coverage from year to year. A typical sampling site and the type of equipment used are shown. No attempt has been made in this report to evaluate the reported data in terms of significant differences in particulate concentrations that may have occurred between sampling stations. Preliminary evaluations of some of the earlier of these data have previously been published (3,4,5,6,7).

As time permits, more such statistical evaluations will be made using all the data collected by the air sampling program. These studies will be directed toward the detection of correlations and trends concerning the nature, extent, causes and effects of air pollution throughout the nation.

HISTORICAL BACKGROUND

In 1953 the Public Health Service, in cooperation with state and local health departments and air pollution control agencies, set up air sampling stations in 17 communities

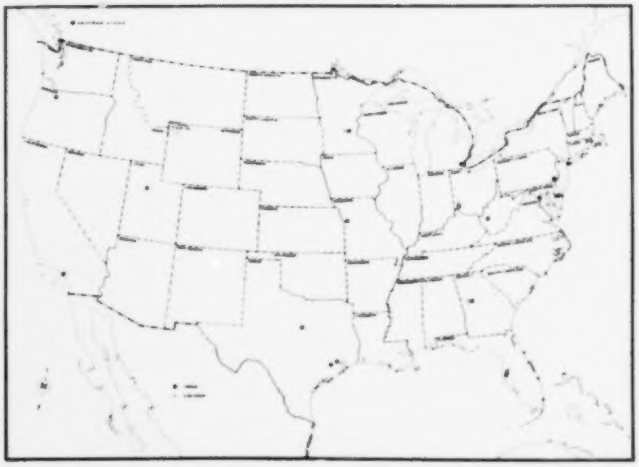

Fig. 1. 1953 National Air Sampling Network

(Fig. 1). Determination of the protein content of airborne particulate matter was the original objective of this project (8). However, since the particulate samples were sufficiently large to permit additional chemical analyses, sample processing soon included determinations for acetone or benzene soluble, organic matter and several inorganic constituents. Sampling equipment and laboratory services were provided by the Sanitary Engineering Center. State and local organizations furnished personnel for station operation.

During 1954-56 several additional stations were activated (Figs. 2,3,4). Some were operated primarily for special investigations of a relatively short term, local nature. Others were established for collecting data on a long term, national basis. Sixty-six communities participated in the program during this period.

Growing interest in the Network project became evident through increasing numbers of requests for participation by state and local organizations. In 1956 a need for a general revision of the entire program was recognized, and plans were initiated for effecting appropriate changes.

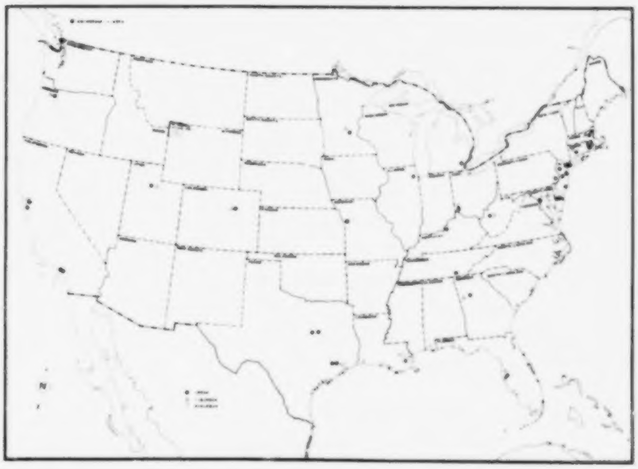

Fig. 2. 1954 National Air Sampling Network

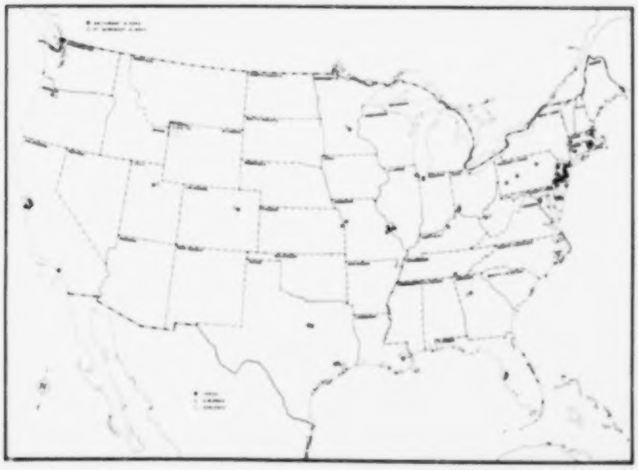

Fig. 3. 1955 National Air Sampling Network

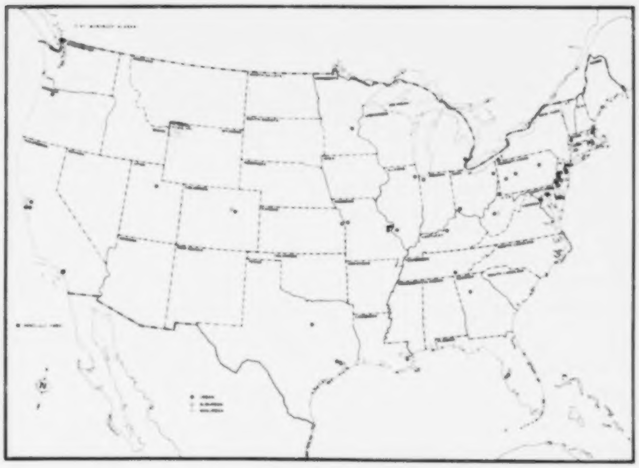

Fig. 4. 1956 National Air Sampling Network

CURRENT OPERATIONS

Major revisions were put into effect on January 1, 1957 (Figs. 5,6—Table A). This new plan called for the simultaneous operation of about 110 urban and 51 nonurban stations in all 48 states, the District of Columbia, and the Territories of Alaska and Hawaii and the Commonwealth of Puerto Rico. In the current program, the largest city in each state or territory in general has been given first priority as an urban station location. However, five conceptions were made to provide better area coverage. After placing 52 stations in this manner, other cities were selected for Network participation, primarily according to population, although again nationwide geographical distribution was also considered. About 110 urban stations are scheduled for operation in any given year. Of this number, 66 remain in operation every year, 19 every other year, and 25 to 28 every third year. Thus, there are 66 on an annual basis, 38 in the biennial category and about 81 participating triennially, comprising a total of 185 urban stations that are operated during any three year period.

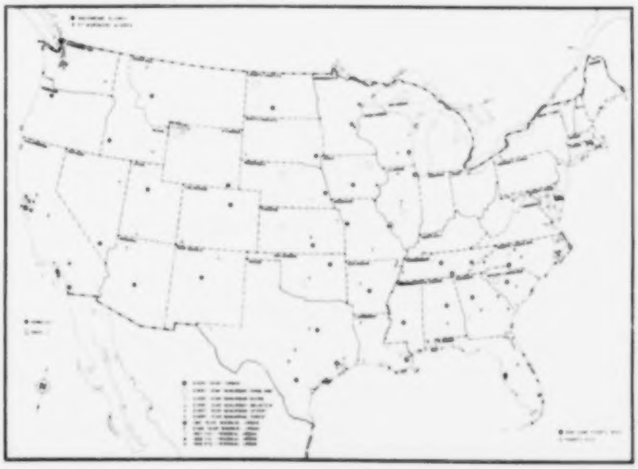

Fig. 5. Current Network

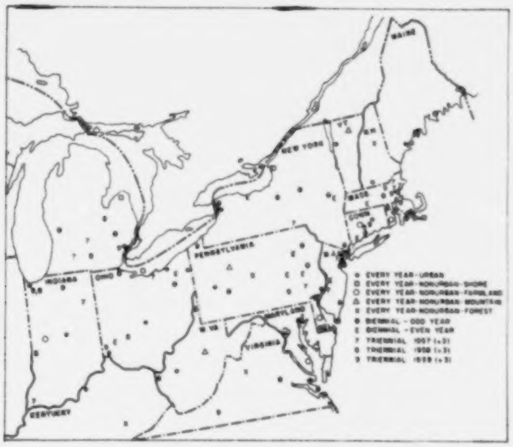
MAINE
VT
NH
NEW YORK
MASS
CONN
PENNSYLVANIA
INDIANA
OHIO
MARYLAND
W VA
VIRGINIA
KENTUCKY
EVERY YEAR-URBAN
EVERY YEAR-NONURBAN-SHORE
EVERY YEAR-NONURBAN-FARMLAND
EVERY YEAR-NONURBAN-MOUNTAIN
EVERY YEAR-NONURBAN-FOREST
BIENNIAL - ODD YEAR
BIENNIAL - EVEN YEAR
TRIENNIAL 1957 (+3)
TRIENNIAL 1958 (+3)
TRIENNIAL 1959 (+3)

Fig. 6. Current Network—Northeast

TABLE A. NATIONAL AIR SAMPLING NETWORK

EVERY YEAR STATIONS

REGION	*STATE*	
New England	Connecticut	Hartford
		New Haven
		Litchfield County*
	Maine	Portland
		Acadia Nat'l Park*
	Massachusetts	Boston
		Nantucket Island*
	New Hampshire	Manchester
		Forest Site*
	Rhode Island	Providence
		Washington County*
	Vermont	Burlington
		Lamoille County*
Mid Atlantic	Delaware	Wilmington
		Kent County*
	New Jersey	Newark
		Cape May*
	New York	Buffalo
		New York
		Cape Vincent*
	Pennsylvania	Philadelphia
		Pittsburgh
		Clarion County*
Mid East	D. C.	Washington
	Kentucky	Louisville
		Cumberland Falls State Park*
	Maryland	Baltimore
		Solomon's Island*
	North Carolina	Charlotte
		Cape Hatteras*
	Puerto Rico	San Juan
		Luquillo Mountains*
	Virginia	Norfolk
		Page County*
	West Virginia	Charleston
		Webster County*
South East	Alabama	Birmingham
		Baldwin County*
	Florida	Tampa
		Florida Keys*
	Georgia	Atlanta
		Oatland Island*
	Mississippi	Jackson
		Jackson County*
	South Carolina	Columbia
		Farmland Site*
	Tennessee	Nashville
		Chattanooga
		Stewart County*
Mid West	Illinois	Chicago
		Sangamon County*
	Indiana	Indianapolis
		East Chicago
		Montgomery County*
	Michigan	Detroit
		Huron County*
	Ohio	Cincinnati
		Cleveland
		Columbus
		Youngstown
		Perry's Monument*
	Wisconsin	Milwaukee
		Door County*
Great Plains	Iowa	Des Moines
		Clayton County*
	Kansas	Wichita
		Ellis County*
	Minnesota	Minneapolis
		Cook County*
	Missouri	Kansas City
		St. Louis
		Shannon County*
	Nebraska	Omaha
		Thomas County*
	North Dakota	Bismarck
		Ward County*
	South Dakota	Sioux Falls
		Black Hills Nat'l Forest*
Gulf South	Arkansas	Little Rock
		Ouachita Nat'l Forest*
	Louisiana	New Orleans
		Gulf Coast*
	New Mexico	Albuquerque
		Colfax County*
	Oklahoma	Tulsa
		Comanche County*

REGION	*STATE*	
	Texas	Dallas
		Houston
		San Antonio
		Calhoun County*
Rocky Mountain	Colorado	Denver
		Montezuma County*
	Idaho	Boise
		Butte County*
	Montana	Helena
		Glacier Nat'l Park*
	Utah	Salt Lake City
		Bryce Canyon*
	Wyoming	Cheyenne
		Yellowstone Nat'l Park*
Pacific Coast	Alaska	Anchorage
		Point Woronzof*
	Arizona	Phoenix
		Grand Canyon*
	California	Los Angeles
		San Diego
		San Francisco
		Humboldt County*
	Hawaii	Honolulu
		Waimanalo*
	Nevada	Las Vegas
		White Pine County*
	Oregon	Portland
		Curry County*
	Washington	Seattle
		Clallam County*

*Nonurban Stations

BIENNIAL STATIONS

REGION	*STATE*	*ODD YEAR*	*EVEN YEAR*
New England	Connecticut		Bridgeport
	Massachusetts	Worcester	Springfield
Mid Atlantic	New Jersey	Jersey City	Trenton
	New York	Schenectady	Albany
		Syracuse	Rochester
		Utica	
	Pennsylvania	Allentown	Harrisburg
		Johnstown	Reading
		Scranton	
Mid East	Virginia	Richmond	
	West Virginia	Wheeling	
South East	Florida	Miami	Jacksonville
	Tennessee	Knoxville	Memphis
Mid West	Illinois		Peoria
	Michigan	Flint	
		Grand Rapids	
	Ohio	Toledo	Akron
		Canton	Dayton
Great Plains	Minnesota	Duluth	
Gulf South	Oklahoma		Oklahoma City
	Texas		Ft. Worth
Pacific Coast	California	San Bernardino	Fresno
		San Jose	Oakland
			Sacramento

TRIENNIAL STATIONS

REGION	*STATE*	*1957*	*1958*	*1959*
New England	Connecticut	Stamford	Waterbury	New Britain
	Massachusetts	Lawrence	Brockton	Cambridge
		Lynn	Fall River	Lowell
		Somerville	Quincy	New Bedford
Mid Atlantic	New Jersey	Camden	Atlantic City	Bayonne
		East Orange	Elizabeth	Paterson
	New York	Binghamton	Yonkers	Niagara Falls
	Pennsylvania	Lancaster		Erie
				York
				Altoona
Mid East	No. Carolina	Winston-Salem	Asheville	Raleigh
			Greensboro	
	Virginia		Hampton	Roanoke
	West Virginia		Huntington	
South East	Alabama		Mobile	Montgomery
	Florida			Orlando
	Georgia	Columbus	Augusta	Savannah
			Macon	
	So. Carolina	Greenville		Charleston
Mid West	Illinois	Springfield	E. St. Louis	Rockford
	Indiana	Evansville	Terre Haute	Hammond
		Ft. Wayne	Gary	South Bend
	Michigan	Kalamazoo	Jackson	Dearborn
		Lansing	Saginaw	
	Ohio	Lorain	Springfield	Hamilton
	Wisconsin	Racine		Madison
Great Plains	Iowa		Davenport	
	Kansas	Kansas City		Topeka
	Minnesota		St. Paul	
	Nebraska	Lincoln		
Gulf South	Louisiana	Baton Rouge		Shreveport
	Texas	El Paso	Austin	Beaumont
		Corpus Christi	Waco	Galveston
Pacific Coast	California	Pasadena	Long Beach	Berkeley
		Burbank	Richmond	Glendale
			Stockton	

Nonurban station locations include both shore and inland sites. Some inland stations are located in mountainous areas along the Continental Divide and in the eastern states. Others are located in farm, forest, desert, or wasteland areas. Nonurban stations were not selected to serve as "clean air" control sites for specific urban stations. However, by placing a nonurban station in each state, there will probably be at least one such station that will provide data suitable for making acceptable comparisons between the urban atmosphere of a specific city with the nonurban atmosphere in the surrounding area. All nonurban stations are operated on an "every year" basis.

Flexibility is incorporated in the program through the inclusion of four interlocking schemes that permit variation in station locations, times of sample collection, types of samples collected, and the analytical procedures employed. Samples from some cities receive more complete analyses than those from other cities. Provision has been made for changing any or all of these factors to effect optimum attainment of program objectives.

ATMOSPHERIC POLLUTANTS MEASURED

In order to fully understand the air pollution problem of a community the chemical composition and concentration of individual pollutants must be determined and the sources of these materials established.

Air pollution may be defined as the presence in the outdoor atmosphere of substances in such quantities, and for such duration as to be injurious to human, animal, or plant life, or to property, or which interferes with enjoyment of life and property. Among the natural pollutants are volcanic ash, soil and sand particles, sea salt nuclei, pollen, plant matter and airborne micro-organisms. Pollutants contributed by the numerous activities of man include many known compounds and probably a much longer list of products of unknown composition.

Pollutants may be classified into two types: (a) gases or vapors, (b) particulate matter consisting of solid particles and liquid droplets. Particulate matter may be further divided into larger particles which settle rapidly, and smaller particles which remain in suspension in the air for varying periods of time. These latter are called suspended particulate matter and form the basis for this report.

Suspended Particulate Matter

Polluted atmospheres contain varying quantities of suspended particulate matter, known technically as aerosols. This suspended particulate matter consists of smoke, dust, and fumes which are solid, and droplets of viscous liquids. Particulate matter varies in size from well below 1 micron to approximately 100 microns, a micron being approximately 1/25,000 of an inch. Among the effects of particulate pollutants are reduction of visibility, soiling of materials, deterioration of materials, plant damage, and possible damage to health.

This particulate matter may arise from a great many sources: combustion of solid, liquid, or gaseous fuels, wastes from metallurgical, chemical, and refining operations, incinerators, and numerous other processes, as well as natural phenomena such as dust storms, volcanic eruptions, sea spray, etc. The measurement of the quantity and composition of suspended particulate matter in the atmosphere sheds light on the nature of particulate pollution. A complete chemical analysis of particulate samples from urban and nonurban areas provides basic data which will be of great value in the over-all attack on air pollution. Such data may be of use in pinpointing sources of pollution and in the prediction of potential health effects.

Organic Pollutants

That fraction of particulate matter that is soluble in solvents such as benzene, chloroform, or acetone is here classed as organic matter.

A wide variety of liquid and solid organic materials are poured into the atmosphere. Among these are substances which may cause irritation of animal tissue. Many cancer producing substances have been isolated from atmospheric organic matter.

Inorganic Pollutants

In contrast to the organic solids considered tarry, the inorganic solids in the air are gritty, ash-like, or crystalline. A very large number of such pollutants have been identified. Since many inorganic materials can be related to specific industrial processes and operations their presence in the air can often be used to determine sources of pollution.

A. Chlorides:

Both chlorine and hydrogen chloride are waste or by-products from synthetic chemical production. These gases may react with other pollutants to form particulate matter or may be adsorbed on particulates, thereby becoming true aerosol pollutants. Considerable quantities of sodium chloride from salt water may be found in the air of coastal areas. Chlorides contribute to the corrosive character of polluted atmospheres.

B. Flourides:

The deleterious effect on plants and animals of atmospheric fluorides has been recognized for many years. Considerable amounts of atmospheric fluoride may be contributed by fertilizer, aluminum, steel, and ceramic industries. The widespread occurrence of fluorides in rocks, ores, etc., may result in the escape of particulate fluorides to the atmosphere during processing of these raw materials.

C. Sulfates:

In addition to the liquid sulfuric acid contributed to the atmosphere by various industrial processes, a considerable amount may result from atmospheric sulfur dioxide which is converted to the trioxide, then to sulfuric acid in the presence of water vapor. This acid reacts with other substances in the air to form sulfates. Most of the sulfur dioxide arises from the combustion of coal and other fuels. Therefore, the particulate sulfate level may reflect the fuel consumption of a community. Since many sulfates are acid in character, they generally have corrosive properties.

D. Nitrates:

Nitrates arise in the air in a manner similar to sulfates, except that nitric acid and oxides of nitrogen are involved instead of sulfuric acid and oxides of sulfur. The nitric acid and oxides of nitrogen come from industrial operations and various combustion processes. The corrosive property of the atmosphere may be enhanced by the presence of nitrates.

E. Metals:

A large number of metals, metal oxides, and salts are released to the atmosphere from a wide variety of industrial processes, urban activities, and natural sources. Since the effluent from a particular industry is limited to the raw materials involved, identification of metals in atmospheric samples may be of use in pinpointing sources of pollution.

Many metals are known to be toxic at certain concentrations. Potential problem areas may be defined on the basis of data obtained by the analysis of samples of suspended particulate matter. Since emission spectrographic procedures are usually employed for the measurement of metals, it is possible to analyze a single sample for a large number of metals with little more effort than required for a few. This has made possible the accumulation of a great deal of basic information on the concentrations of many metallic pollutants whose significance has not yet been determined.

Radioactive Materials

The rapid increase in the use of atomic energy for industrial, medical, and military purposes has stimulated interest in the measurement of radioactivity of the atmosphere. In contrast to the majority of particulate pollutants which may be traced only to local sources, radioactive materials are unique in that they may be detected from sources several thousand miles distant. This uniqueness exists as a result of the super-sensitive methods available for the determination of radioactive materials, as compared to the lower sensitivity of the chemical methods used for the other analyses reported here.

SELECTION OF STATION LOCATIONS

During the period 1953-56, two or more sampling stations were operated in most communities. The stations were located in commercial, industrial, residential and rural sections of either urban or suburban areas, resulting in samples from distinctly different environments in the communities selected. It would have been desirable to continue sampling in this manner; however, budgetary limitations necessitated a cutback in this area to allow expansion of Network coverage to all sections of the country. Hence, since January 1, 1957, only one station has been operated in each city. Wherever possible, the site selected was located in a centrally situated business district. Station elevations of less than 50 feet above ground were recommended but not obtained in all instances as suitable sites were not available. An effort was made to discourage location of sampling equipment on buildings immediately surrounded by higher structures since strong wind eddies induced by air movement around structures may create dusty conditions on roofs of nearby lower buildings.

For a given city any differences in data between the site selected and another sampling site would depend on the characteristics of the two sites. For example, the data obtained from a downtown commercial-industrial site could be expected to be appreciably different from that from a residential location near the outskirts of town. Further, data from two commercial-industrial locations in the same general area should, in general, not differ greatly. Such comparisons may be made by inspection of the data for comparable time periods of the several multi-site cities included in the tabular presentations.

SAMPLING EQUIPMENT AND PROCEDURE

Suspended particulate samples are obtained with a high volume air sampler (9) operated for 24 hours (Fig. 7) using an 8″ x 10″ glass fiber filter (10) capable of removing practically 100% of all particulates 0.3 micron, or greater, in diameter.

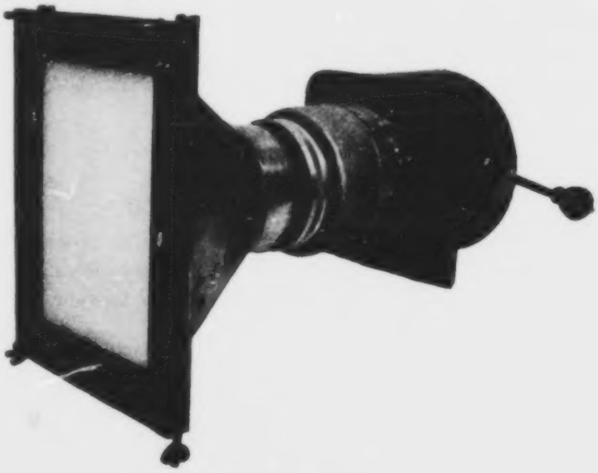

Fig. 7. Sampler

At most urban stations air flow rates average about 40-50 cubic feet per minute. At nonurban stations the rates are higher, usually averaging in the 55-65 cfm range. Since air flow progressively diminishes as particulates accumulate on and increase the flow resistance of the filter, differences in average sampling rates reflect differences in the amounts of particulate matter present as all samplers are set to operate initially at about 55-65 cfm. The volume of air filtered is taken as the product of the time interval and the average of initial and final flow rates observed during each sampling period, on the assumption that the flow rates decrease uniformly during the sampling period.

At all stations activated prior to January 1, 1957, sampling equipment was housed in shelters constructed by the cooperating organizations. Recommended shelter specifications (Fig. 8) were provided by the Sanitary Engineering Center, but several shelters were not fabricated according to the proposed design. All shelters did, however, have end openings that permitted air to enter and pass through the sampler and shelter in a horizontal direction. With this orientation a variation in sampling could occur depending on the wind direction. To insure a higher degree of uniformity in filter exposure, a vertically oriented shelter (Fig. 9) was designed and provided by the Sanitary Engineering Center for all stations operated after January 1, 1957. In addition to serving as a sampler enclosure, the new shelter can be converted readily into a shipping container for sampling equipment. Since shelter design may affect collection characteristics of sampling equipment, care should be exercised when comparing data from samples collected at sites where different types of shelters have been used. Based on data from ten cities for a year, average sampler flow during the sampling period results in an average velocity across the horizontal air inlet portal of the new shelter of 64 fpm. Since flow is vertically upward at this velocity collection of particles is limited to those 100 microns and less in diameter.

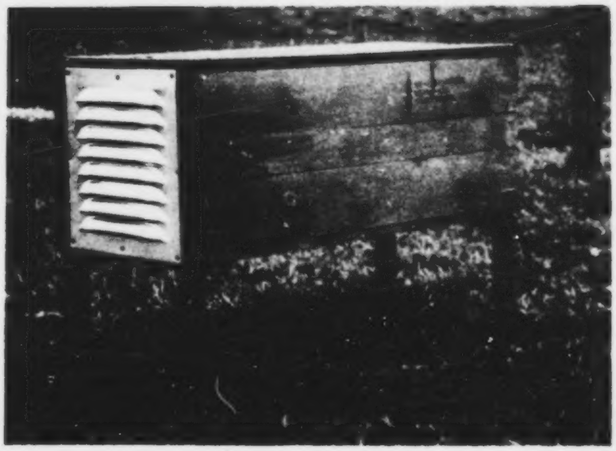

Fig. 8. Horizontal Shelter

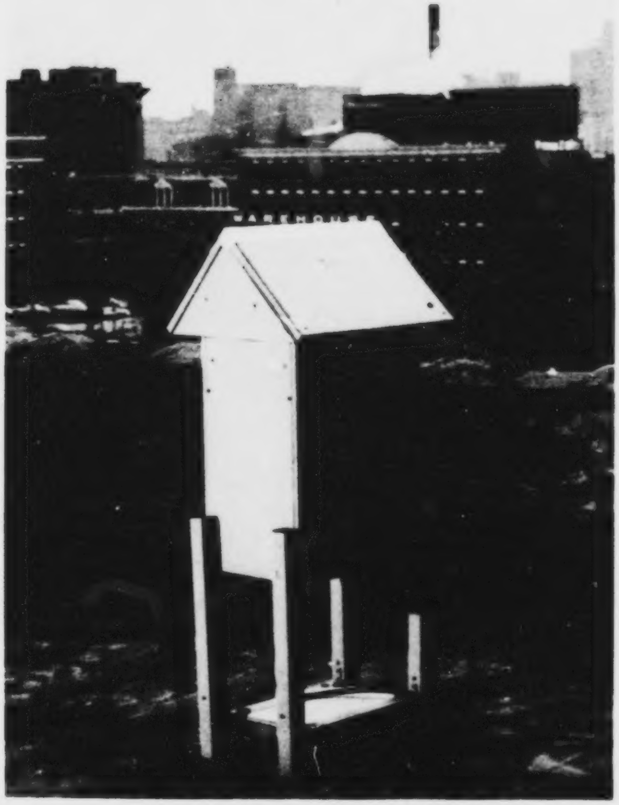

Fig. 9. Vertical Shelter and Typical Site

Prior to January 1, 1957, most samples were collected at the rate of one per week and at times convenient for the station operators. Since this date, sampling frequency was reduced to one sample every two weeks to permit inclusion of additional participants in the expanded program. Station operators were given sampling schedules specifying the day of the month and the time of day each period was to begin and terminate. The days and times were randomly selected by statistical methods. This was done to reduce the possibility of having samples collected in time phase with repetitious conditions which might include significant pollution levels related to certain time intervals.

Samples are sent to the Sanitary Engineering Center for analysis as soon as possible after collection. Originally they were sent to the laboratory in small ointment cans. These were soon discarded in favor of manila folders (Fig. 10) and envelopes into which the filters could be placed after folding in the middle. When filters are transmitted in this manner, they arrive at the laboratory as smooth sheets that can be divided readily into aliquots of suitable size.

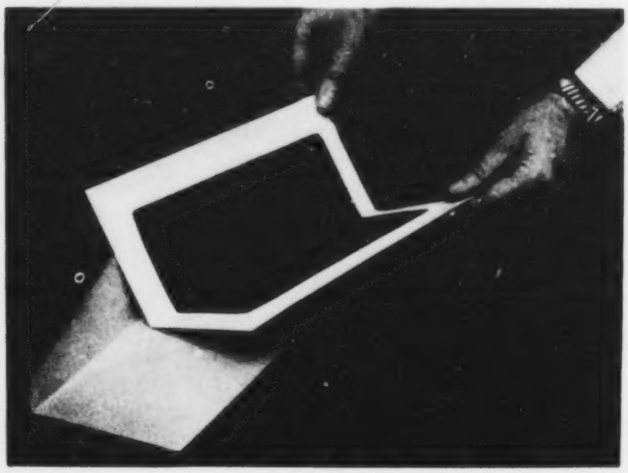

Fig. 10. Filter and Mailing Container

SAMPLE SCHEDULING

During the first four years, the Network, for the most part, operated on a weekly sampling basis. At many of the stations samplers were started and stopped the same hour of the same day each week. When the decision was made to expand the Network to give a truly national coverage, budget limitations demanded a reduction in the number of samples per station per year. Therefore, in 1957 the Network began biweekly sampling with the day and hour of start of each sample selected according to a randomized schedule (11).

A simple random sampling schedule was adopted as the best practical means of meeting the basic objectives of the Network, namely, unbiased estimation of mean daily particulate levels and of peak loadings during such year. Obviously, it was impossible to arrange in advance for proportionate sampling of conditions such as weather, variability of industrial activities, etc., which could affect pollutant levels in each community during an upcoming year. In addition, analysis of existing data indicated that proportional allocation of sampling between weekend and weekday periods would not produce appreciably more precise estimates of mean particulate loadings (11).

The randomized schedule for all stations is supplied by the Network, and is derived yearly as follows: All possible three digit (or less) numbers are arrayed sequentially, beginning with 1, in columns each with 126 rows. Such a table has 7 columns (8 columns would involve 4 digit numbers) and the maximum entry is 882. Table B is a portion of this table. The rows of the table are grouped into 14 sets of 9 rows each, totalling 126 numbers per column, in which the groups correspond to the number of days in a two-week sampling period and the 9 rows, numbered 8 to 16, represent the starting hour of the sampler, the period 8 a.m. to 4 p.m. being within the normal working day. The selection for a particular station is illustrated by Table C, which is part of a random schedule that was prepared for one of the Network cities. Numbers 1-882 inclusive were drawn at random and entered on the schedule. The first number drawn, 520, was assigned to the first biweekly sampling period, that beginning January 1. Referring to Table B, it is noted that the sampling day fell on the second day of the sampling period and that the starting time was the 14th hour of the day. The starting time was between 2:00 and 3:00 p.m. on January 2, the station operators being given an interval of one hour for starting the sampler. Similarly, 25 more numbers were drawn and assigned to the other biweekly sampling periods, 397 being the second number selected, 280 the third, etc.

TABLE B. REFERENCE TABLE FOR DETERMINING DAY AND HOUR FOR STARTING SAMPLER

							Starting	
							Time	Day
1	127	253	379	505	631	757	8	1
2	128	254	380	506	632	758	9	
3	129	255	381	507	633	759	10	
4	130	256	382	508	634	760	11	
5	131	257	383	509	635	761	12	
6	132	258	384	510	636	762	13	
7	133	259	385	511	637	763	14	
8	134	260	386	512	638	764	15	
9	135	261	387	513	639	765	16	
10	136	262	388	514	640	766	8	2
11	137	263	389	515	641	767	9	
12	138	264	390	516	642	768	10	
13	139	265	391	517	643	769	11	
14	140	266	392	518	644	770	12	
15	141	267	393	519	645	771	13	
16	142	268	394	520	646	772	14	
17	143	269	395	521	647	773	15	
18	144	270	396	522	648	774	16	
124	250	376	502	628	754	880	14	14
125	251	377	503	629	755	881	15	
126	252	378	504	630	756	882	16	

TABLE. C. WORKSHEET FOR PREPARATION OF RANDOM SAMPLING SCHEDULE

Schedule of Sampling Periods

Number of City .... **Name of City** ....

Sampling period	Dates of sampling periods	Random number (1-882)	Hour		Day	Date of starting day
1	1/1 - 1/14	520	14	2-3 PM	2	Wed.-Jan. 2
2	1/15 - 1/28	397	8	8-9 AM	3	Th.-Jan. 17
3	1/29 - 2/11	280	8	8-9 AM	4	Fri.-Feb. 1
4	2/12 - 2/25	693	16	4-5 PM	7	Mon.-Feb. 18
5	2/26 - 3/11	870	13	1-2 PM	13	Sun.-Mar. 10
6	3/12 - 3/25	411	13	1-2 PM	4	Fri.-Mar. 15
7	3/26 - 4/8	527	12	12N-1 PM	3	Th.-Mar. 28
8	4/9 - 4/22	153	16	4-5 PM	3	Th.-Apr. 11
9	4/23 - 5/6	851	12	12N-1 PM	11	Fri.-May 3
10	5/7 - 5/20	366	13	1-2 PM	13	Sun.-May 19
11	5/21 - 6/3	822	10	10-11 AM	8	Tue.-May 28
12	6/4 - 6/17	234	16	4-5 PM	12	Sat.-June 15
13	6/18 - 7/1	773	15	3-4 PM	2	Wed.-June 19
14	7/2 - 7/15	423	16	4-5 PM	5	Sat.-July 6

EXPLANATION OF DATA TABULATIONS

Monthly and frequency distribution tables have been prepared for the following atmospheric pollutants: suspended particulates, acetone soluble organic matter, benzene soluble organic matter, β-radioactivity, chlorides, fluorides, nitrates, sulfates, barium, bismuth, cadmium, copper, chromium, iron, lead, magnesium, manganese, nickel, postassium, sodium, strontium, tin, titanium, vanadium and zinc. The data for antimony, arsenic, beryllium, cobalt, molybdenum and silver are presented in separate tables.

The sequence in which stations are listed in the data tabulations is the same as that for the sampling site descriptions.

Monthly Distribution Tables

The monthly distribution tables list the number of samples analyzed and the minimum, maximum, and average pollutant concentrations for each month. In these tabulations the data for all samples collected in each city, including those for which there was more than one sampling site prior to 1957, have been pooled to give total monthly distributions for the combined years of sampling in a given community. Cases where sampling is indicated but where values are not listed for minimum, maximum, or average values in a month indicate that values were below the minimum detectable by the analytical procedure employed. The total number of samples in the monthly distribution tables in each instance equals the number of samples listed in the frequency distribution table for the combined years of station operation in that city.

Except for radioactivity measurements, monthly data, in general, are not presented for any station where sample collection covered less than five months or where most of the values are below the minimum detectable quantity.

Frequency Distribution Tables

The frequency distribution tables indicate the number of samples analyzed and minimum, maximum, and average pollutant concentrations. In addition to listing these data for each year of operation at a given site, composite values are presented for all years included in the operating period for each site. The last group of figures tabulated under a given station represents values for samples collected at all sites in the community during the years indicated. For each station the total number of samples for all years combined is equal to the sum of the number of samples for the individual years. Similarly, for each year, the sum of the number of samples for each site equals that for the city. Lastly, the number of samples for all sites for all years is the sum of the numbers of samples for each site for all years. Thus, as in the case of New York, N.Y. (Table 1), site 1 was operated during 1957 (25 samples); site 2 from 1953 to 1956 inclusive (105 samples); site 3 from 1953 to 1956 inclusive (103 samples) and site 4 in 1954 and 1955 (26 samples), for a total for all sites for all years of 259 samples, and as has already been noted, these 259 samples are included in the monthly distribution table. The month of occurrence of the maximum and minimum values listed for all sites for all years may be located in the same monthly distribution table.

Frequency distributions of urban data for most pollutants are also presented for state, regional, and national totals. Since the number of suburban and nonurban sites for which data are available is usually small and in most cases consists of only one site per state, no state and regional totals for suburban and nonurban data are given. The state, regional, and national totals may differ slightly from the results obtained by summing the data included in the tables due to the inclusion of data for six sites which were not listed on account of the small number of samples involved.

The figures appearing in the nine percentile columns of the frequency distribution table represent maximum concentration values for the nine percentiles designated in the column headings. For example, in Table 1 for site 1, Everett Massachusetts, for 1954, the figure 34 shown in the 10% percentile column indicates that 10% of the samples collected at site 1 represented suspended particulate concentrations not greater (equal to or less) than 34 micrograms per cubic meter of air sampled, and conversely, 90% of the samples had concentrations greater than 34 $\mu g/m^3$. Median concentrations may be found in the 50% column.

The nine decile values in the frequency distributions are determined by an electronic computer which proceeds mechanically whether or not there are sufficient data to warrant determination of such deciles. For this reason, there are included in the print-out decile values for analyses in which the number of samples is not sufficient to produce outwardly meaningful results. In such cases, adjacent deciles may have the same values. To aid in understanding the decile values, a brief description of the computation procedure follows:

A. First, the maximum and minimum values in the *entire* body of data to be computed were determined. In this report the entire body of data included all values for a particular pollutant (e.g. suspended particulate) for the entire United States for the years 1953-1957, inclusive.

B. A geometric progression was determined which started at the minimum value and terminated at the maximum value in 42 arguments. A geometric progression limited to 42 steps was used because of the amount of computer storage space available.

C. The distribution of samples for any pollutant was prepared by assigning each sample to the interval wherein it exceeded the lower limit and was not greater than the upper limit.

D. From this distribution a cumulative frequency distribution, starting with the minimum argument in the table, was determined.

E. The total number of samples being known, the number of samples included in each decile, was determined by multiplying by the appropriate decile, e.g., if the total number of samples was 104, the number included in the first decile is 10.4. These values were then rounded off to the nearest whole number, i.e., 10.4 rounds off to 10, etc.

F. For each of these nine rounded-off values representing the deciles the cumulative frequency distribution table was searched to determine the number in the table equal to or larger than the rounded-off values. Where a number was found in the table equal to the rounded-off value, the corresponding geometric argument was recorded as the appropriate decile value. Where the rounded-off value was not equal to but smaller than a number in the table, a linear interpolation was performed between the geometric arguments associated with the numbers in the cumulative frequency distribution table greater than and less than the rounded-off value and the interpolated value recorded as the appropriate decile value.

When the number of samples becomes less than 10, duplication in adjacent decile values occurs. When there are 9 samples, the rounded-off values of the 50% and 60% deciles are the same. When there are 5 samples, the 10 and 20%; the 30 and 40%; 50 and 60%; and the 70 and 80% deciles are pairs of identical values. With less than 5 samples, the lower decile values are zero and 3 or more decile values are identical until, with only 2 samples, the 10 and 20% deciles are zero; the deciles from 30 through 70% repeat; and the 80 and 90% deciles are identical. As a result of the procedures used, when deciles are computed for a small number of samples, the computation can yield results in which the lowest decile value is less than the minimum and the highest greater than the maximum. Such decile values are obviously not valid. However, some frequency distributions involving only a few samples were included in the tabulations as they still afford meaningful information about the samples provided one understands the computing procedures used. This information would otherwise be unavailable if all such tabulations were arbitrarily deleted from the several tables.

Detailed frequency distribution tables have been presented for suspended particulates, acetone and benzene soluble organics, and β-radioactivity, due to the large amount of data available.

The data for the inorganic pollutants are a condensation of a more detailed tabulation not included herein. If, for instance, 15 samples were analyzed for sulfates in 1954 and 13 in 1955, the table will show a single tabulation of 28 samples for the years 1954-1955, if the 15 samples were collected in the last half of 1954, and the 13 samples in the first half of 1955. If, on the other hand, the samples analyzed for a given year were well distributed throughout the year the data are presented on a yearly basis.

The number of samples containing concentrations of antimony, arsenic, beryllium, cobalt, molybdenum and silver above the minimum detectable quantity was so small that the data could not be presented in the same manner as for those pollutants mentioned above. It was impossible to compute average levels, and there was no basis for setting up frequency distribution tables due to the narrow ranges of values found. Since a large number of samples had been analyzed for these materials the data should be of interest. The total number of samples analyzed for a city, suburban or nonurban station, the minimum concentration which, in all cases, is below the detectable level, the maximum concentration, and the number of samples showing less than the detectable amount, are shown in separate tables.

SAMPLING SITE DESCRIPTIONS AND PARTICIPATING ORGANIZATIONS

Sampling sites for urban and suburban stations have been classified (Table D) with respect to the general area in which they were located, namely, commercial, industrial, residential or rural. In some instances stations have been located in districts encompassing two or more of these general categories. Area classifications have been coded using the letters C, I, R or RU to designate commercial, industrial, residential or rural, respectively. Immediately following each area abbreviation, the height of the station above ground level has been given. Following this are the station address and the name of the participating organization. In the absence of well defined guides for classifying the areas involved, individual opinions on site descriptions may vary considerably. In most cases, however, the classifications presented are believed to be commensurate with common interpretations of zonal divisions in the areas in question.

Nonurban stations have been placed in the following geographic and land use categories: Atlantic, Gulf of Mexico, Appalachian, Great Lakes, Continental Divide, Pacific, forest, farmland, and desert or wasteland. Station elevation above sea level and the name of the participating agency appear after the classification for each nonurban station. In some instances classifications overlap; for example, a mountain site may also be in a forested area.

The cities comprising the 1953-57 Network are listed in the following sampling site descriptions, in the same sequence as they appear in the data tabulations later in this report. This sequence is as follows:

A. Within each city, sites are listed in numerical order.

B. Within each state, cities are listed in the order in which they were added to the Network (in order to facilitate data processing using electronic computers). Rearrangement of cities into alphabetic order within each state tends to introduce errors into the tabulation, which is to be avoided.

C. States and territories are listed alphabetically within the following nine regional groupings, corresponding to the regional organization of the Public Health Service:

New England: Conn., Me., Mass., N.H., R.I., Vt.
Mid Atlantic: Del., N.J., N.Y., Pa.
Mid East: Dist. of Col., Ky., Md., N.C., Puerto Rico, Va., W.Va.
South East: Ala., Fla., Ga., Miss., S.C., Tenn.
Mid West: Ill., Ind., Mich., Ohio, Wisc.
Great Plains: Ia., Kans., Minn., Mo., Nebr., N.D., S.D.
Gulf South: Ark., La., N.M., Okla., Tex.
Rocky Mountain: Colo., Id., Mont., Utah, Wyo.
Pacific Coast: Alaska, Ariz., Calif., Hawaii, Nev., Ore., Wash.

The geographical designations have been added for the purposes of this report since these names are more meaningful than the numerical designations of Public Health Service Regions customarily employed.

TABLE D. SAMPLING SITE DESCRIPTIONS AND PARTICIPATING ORGANIZATIONS

URBAN STATIONS

NEW ENGLAND

Waterbury, Conn.—C I, 54 ft., City Hall, City Health Department.

Hartford, Conn.**—C I, 19 ft., 1179 Main St., State Health Department.

New Haven, Conn.**—C R, 58 ft., 165 Elm St., Yale University, City Health Department.

Stamford, Conn.**—C, 45 ft., Central Fire Station, 653 Main St., City Health Department.

Portland, Me.**—C, 74 ft., 178 Middle St., State Health Department.

Boston, Mass.—C, 55 ft., Haymarket Square, State Health Department.

Pittsfield, Mass.**—I C R, samples obtained at several points. State Health Department.

Everett, Mass.—I C R, 30 ft., Public Works Department Garage, State Health Department.

Lawrence, Mass.**—C, 37 ft., Lawrence Experiment Station, 37 Shattuck St., State Health Department.

Lynn, Mass.**—C I, 34 ft., City Hall, City Health Department.

Somerville, Mass.**—I R, 47 ft., Somerville High School, City Health Department.

Worcester, Mass.**—C, 60 ft., Police Headquarters Building, 5 Waldo St., City Health Department.

Manchester, N. H.*—C, 45 ft., Police Station, 351 Chestnut St., City Health Department.

Providence, R. I.**—Site 1—C I, 22 ft., Police Headquarters Building, Fountain St., City Division of Air Pollution Control and Mechanical Equipment Installations.

Site 2—R, 22 ft., Mt. Pleasant High School, City Division of Air Pollution Control and Mechanical Equipment Installations.

Burlington, Vt.**—C, 26 ft., 115 Colchester Avenue, State Health Department.

MID ATLANTIC

Wilmington, Del.**—C, 40 ft., Public Building, French St., between 10th & 11th Sts., City Health Department.

Atlantic City, N. J.**—C, 2 ft., Boardwalk & New Jersey Ave., New Jersey Health Department.

Hightstown, N. J.**—C R, 2 ft., New Jersey Turnpike Maintenance Building, Exit No. 8, New Jersey Health Department.

Glen Gardner, N. J.**—R, 2 ft., Glen Gardner Sanitarium, Lebanon Township, New Jersey Health Department.

Red Bank, N. J.** — R, 2 ft., Tower Hill Filter Station, Red Bank Water Department, New Jersey Health Department.

Elizabeth, N. J.—I C R, 17 ft., Turnpike Maintenance Building No. 5, City Health Department.

Paulsboro, N. J.—I R, 15 ft., Water Department Building, Pump House No. 3, State Health Department.

Camden, N. J.—C, 55 ft., City Bureau of Fire Building, 5th & Arch Sts., City Bureau of Fire.

Perth Amboy, N. J.—C, 20 ft., City Fire Department Building, Engine Company No. 6, State Health Department.

Trenton, N. J.—C, 60 ft., State House Annex, State Health Department.

Jersey City, N. J.—C I, 85 ft., Medical Center Building, City Health Department.

East Orange, N. J.**—R I, 218 ft., Veterans Administration Hospital, Veterans Hospital Engineering Department.

Newark, N. J.**—C I, 65 ft., City Health Department Building, 920 Broad St., City Health Department.

New York, N. Y.—Site 1—R C, 75 ft., 170 East 121st St., Manhattan, Air Pollution Laboratory, City Department of Air Pollution Control.

Site 2—I R, 25 ft., 207 Norman Avenue, Greenpoint, City Department of Air Pollution Control.

Site 3—Park R, 75 ft., Central Park, New York Meteorological Observatory, City Department of Air Pollution Control.

Site 4—R, 2 ft., Staten Island, Rossville, Wagner College.

Binghamton, N. Y.** — C I, 36 ft., City Health Department Building, 54 Hawley St., City Health Department.

Buffalo, N. Y.*—C R I, samples obtained at several points. City Department of Public Works.

Schenectady, N. Y.**—C R, Fire Station No. 6, Eastern & Wendell Ave., City Health Department.

Syracuse, N. Y.**—I R, 30 ft., Water Supply Building, 101 North Beech St., City Division of Smoke and Air Pollution Control, Department of Engineering.

Utica, N. Y.**—I, 95 ft., City Health Department Building, 406 Elizabeth St., City Health Department.

Philadelphia, Pa.—Site 1—C, 236 ft., City Hall Annex, City Health Department.

Site 2—C R, 20 ft., Lombard Laboratory, Lombard & 16th Sts., City Health Department.

Site 3—R, 50 ft., Greenhills Manor, City Health Department.

Site 4—C I R, 27 ft., Frankford Health Center, Allegheny & Frankford Ave., City Health Department.

Site 5—Park R, 20 ft., Memorial Hall, Fairmount Pk. City Health Department.

Site 6—C R, 100 ft., St. Agnes Hospital, Synder Ave. & Broad St., City Health Department.

Site 7—R, 20 ft., Fire Station, Van Kirk & Harbison Sts., City Health Department.

Altoona, Pa.—C R, 35 ft., Armory, Howard Ave., State Health Department.

Bristol, Pa.—R, 4 ft., Bristol Waterworks, Riverside, State Health Department.

Chester, Pa.—I C R, 15 ft., Sewage Disposal Plant, Front & Clayton Sts., State Health Department.

Erie, Pa.—R, 2 ft., Sigsbee & 26th Sts., State Health Department.

Pittsburgh, Pa.—Site 1—C R, 18 ft., 3400 Forbes St., State Health Department.

Site 2—C, 25 ft., City-County Building, Allegheny County Health Department.

Williamsport, Pa.—I R, 7 ft. ,140 East 3rd St., State Health Department.

Allentown, Pa.**—C I, 37 ft., City Hall, 626 Linden St., City Health Department.

Johnstown, Pa.**—C, Public Safety Building, Market & Washington Sts., State Health Department.

Lancaster, Pa.**—C I, 35 ft., Post Office Building, Marion & Market Sts., State Health Department.

Scranton, Pa.** — C, 50 ft., Fire Station, Mulberry & Washington Ave., State Health Department.

MID EAST

Washington, D. C.—Site 1—C R, 70 ft., U. S. Department of Health, Education & Welfare Building, North, District of Columbia Health Department.

Site 2—C R, 65 ft., Cardozo High School, District of Columbia Health Department.

Site 3—R, 75 ft., Upshur & 13th Sts., N. W., District of Columbia Health Department.

Louisville, Ky.—Site 1—R, 20 ft., Broadway & 37th St., Jefferson County Air Pollution Control District.

Site 2—R, 20 ft., 5600 South 3rd Sts., Jefferson County Air Pollution Control District.

Site 3—Park R, 12 ft., Iroquois Park, Jefferson County Air Pollution Control District.

Site 4—C, 7th & Jefferson Sts., Jefferscon County Air Pollution Control District.

Baltimore, Md.—C I, 39 ft., Fire Department Headquarters Building, 410 East Lexington Sts., City Health Department.

Charlotte, N C.*—C R, 40 ft., Health Department Building, 615 East 4th St., City Health Department.

Winston Salem, N. C.**—C I, 18 ft., Forsythe Health Department Building, Woodland Ave. & West 7th St., Forsythe County Health Department.

San Juan, P. R.** — C I, 15 ft., Public Health Building, Catano, Puerto Rico Health Department.

Norfolk, Va.*—C I, 46 ft., City Health Department Building, 512 East Plume St., City Health Department.

Richmond, Va.** — C R, 75 ft., Mosque Building, Laurel & Main Sts., City Division of Air Pollution Control, Department of Public Safety.

Charlestown, W. Va.—Site 1—C I R, 120 ft., State Office Building, 1800 East Washington St., State Health Department.

Site 2—C I R, 100 ft., Parking Building, 212 California Ave., State Health Department.

Wheeling, W. Va.**—C, 38 ft., Fire Station, Eoff & 17th Sts., City Department of Air Pollution Control.

SOUTH EAST

Birmingham, Ala.**—C R, 40 ft., University Medical Center, 1912 Eighth Ave., So., Jefferson County Health Department

Tampa, Fla.—C, 50 ft., City Hall, Lafayette between Florida & Franklin Sts., City Bureau of Sanitary Sewers, Department of Public Works.

Miami, Fla.**—C I, 30 ft., Flagler St. between Miami & 2nd Ave., City Building Department and Dade County Health Department.

Atlanta, Ga.—Site 1—C, 12 ft., Health Department Building, 224 Central Ave., S. W., Fulton County Health Department.

Site 2—R, 15 ft., Fire Station No. 27, Northside Drive & W. Conway Drive, Fulton County Health Department.

Columbus, Ga.**—C I, 35 ft., Police Station, 156 First Ave., City-County Health Department.

Jackson, Miss.**—C R, 90 ft., Old Capitol Building, Capitol & State Sts., State Health Department.

Columbia, S. C.**—C I, 25 ft., Laurel & Sumter Sts., City Inspection Division, Smoke Abatement Control, Department of Public Works.

Greenville, S. C.**—C, City Curb Market, 200 Elford St., City Division of Smoke & Air Pollution Control.

Chattanooga, Tenn.—Site 1—C, 4 ft., samples collected at several points. City Bureau of Air Pollution Control & Boiler Inspection.

Site 2—R, 3 ft., to 24 ft., samples collected at several points. City Bureau of Air Pollution Control & Boiler Inspection.

Site 3—R, 4 ft., Tuberculosis Hospital, Glenwood Ave., City Bureau of Air Pollution Control & Boiler Inspection.

Site 4—C, 4 ft., City Hall, Lindsay & East 11th St., City Bureau of Air Pollution Control & Boiler Inspection.

Knoxville, Tenn.**—C I, 90 ft., Masonic Building, 505 Locust St., City of Knoxville Bureau of Smoke Regulation & Boiler Inspection, Department of Public Service.

Nashville, Tenn.*—C I, 98 ft., City-County Building, Public Square, City Bureau of Inspection & Permits, Division of Smoke Regulation, Department of Public Works.

MID WEST

Chicago, Ill. — Site 1 — C, 20 ft., Water Tower, Michigan & Chicago Aves., City Department of Air Pollution Control.

Site 2—C, 46 ft., City Shops, 1348 Monroe, City Department of Air Pollution Control.

Site 3—R, 40 ft., 7300 Pratt Boulevard, City Department of Air Pollution Control.

Site 4—I R, 35 ft., Filtration Plant, 79th St. & Lake Michigan, City Department of Air Pollution Control.

Site 5—C, City Office Building, 320 N. Clark St., City Department of Air Pollution Control.

East St. Louis, Ill.—Site 1—C, 60 ft., Federal Building, 435 Missouri Ave., East Side Health District.

Site 2—R, 40 ft., Harding School, 731 North 74th St., East Side Health District.

Springfield, Ill.**—C, Fire Station No. 1, 718 East Monroe, City Department of Public Health & Safety.

East Chicago, Ind.—Site 1—I, 40 ft., Fire Station No. 2, Elm & Guthrie Sts., City Bureau of Air Pollution Control.

Site 2—I, 30 ft., Sewage Disposal Plant, City Bureau of Air Pollution Control.

Site 3—I, 45 ft., Indiana University, City Bureau of Air Pollution Control.

Site 4—I, 25 ft., Cudahy Packing Co., City Bureau of Air Pollution Control.

Evansville, Ind.**—C, Central Library, 5th & Locust St., City Department of Smoke Control, Board of Public Works.

Ft. Wayne, Ind.**—C, 18 ft., Police Garage Building, 316 East Berry St., City Building Department.

Indianapolis, Ind.*—C, 46 ft., Fire Station, Alabama & New York Sts., Bureau of Air Pollution Control.

Detroit, Mich.—Site 1—C, 150 ft., Majestic Building, Woodward & Michigan, City Bureau of Smoke Inspection & Abatement, Department of Buildings & Safety Engineering & Public Health Service

Site 2—C, 65 ft., 1416 Woodward, City Bureau of Smoke Inspection & Abatement, Department of Buildings & Safety Engineering.

Site 3—R, 25 ft., 14717 Curtis, City Bureau of Smoke Inspection & Abatement, Department of Buildings & Safety Engineering.

Site 4—C, 78 ft., Detroit Public Library, 5201 Woodward, City Bureau of Smoke Inspection & Abatement, Department of Buildings & Safety Engineering.

Grand Rapids, Mich.**—C, 26 ft., City Hall, Ionia Avenue & Lyon Sts., City Air Pollution Control & Heating Department.

Kalamazoo, Mich.**—C, Upjohn Building, West Lovell & South Rose Sts., City-County Health Department.

Lansing, Mich.**—C, 22 ft., Central Fire Station, 120 E. Shiawassee St., City Air Pollution Board.

Flint, Mich.**—C, 40 ft., Fire Station No. 2, Garland St. & 5th Ave., City Department of Weights & Measures.

Cincinnati, O.—Site 1—C R I, 80 ft., 417 Lincoln Park Drive, City Bureau of Air Pollution Control & Heating Inspection.

Site 2—R, 75 ft., Abbe Observatory, Lafayette Circle, Robert A. Taft Sanitary Engineering Center, Public Health Service.

Site 3—R C, 48 ft., 4676 Columbia Parkway, Public Health Service, Robert A. Taft Sanitary Engineering Center, Public Health Service.

Site 4—I C, 2 ft., Murray Road, Robert A. Taft Sanitary Engineering Center, Public Health Service.

Youngstown, O.—C I, 105 ft., City Hall, Boardman & Phelps, City Air Pollution Control Section, Division of Engineering, Department of Public Works.

Canton, O.**—C, 25 ft., Main Post Office, Cleveland Ave., S. W. between 2nd & 3rd Sts., City Health Department.

Cleveland, O.*—C R I, 30 ft., Post Office, 1950 East 101st St., City Division of Air & Stream Pollution, Department of Urban Renewal & Housing.

Columbus, O.** — C, 55 ft., State Capitol Annex, Broad & High Sts., City Division of Smoke Regulation & Inspection, Department of Safety.

Toledo, O.**—C R, 24 ft., Water Department Building, 565 North Erie St., City Division of Air Pollution Control & Inspection, Department of Public Safety.

Lorain, O.** — C I R, 20 ft., Board of Health Building, 14th St., City Board of Health, Department of Public Service.

Milwaukee, Wisc.—C I, 60 ft., Public Library, West Wells & North 9th Sts., Milwaukee County Department of Smoke Regulation.

Racine, Wisc.**—C I, 17 ft., Police Department Building, 107 Third St., City Health Department.

GREAT PLAINS

Des Moines, Ia.*—C, 32 ft., Fire Station #1, 10th & Mulberry, City-County Health Department.

Kansas City, Kans.**—Site 1—C, 20 ft., Fire Station, 5th St. & Kansas Ave., City-County Health Department.

Site 2—C R, 25 Ft., Health Department Building, 619 Ann Ave., City-County Health Department.

Wichita, Kans.* —C, 35 ft., Fire Station, Third & Water Sts., City-County Health Department.

Minneapolis, Minn. — C I, 64 ft., State Health Department Building, University of Minnesota, State Health Department.

Duluth, Minn.**—C I, 63 ft., 409 City Hall, City Health Department.

Kansas City, Mo.—Site 1—C, 200 ft., Federal Office Building, 911 Walnut St., Public Health Service.

Site 2—C, 15 ft., Police Garage Building, 1325 Oak St., City Health Department.

Site 3—R, 3 ft., 309 East 68th Terrace, Public Health Service.

Site 4—Park R, 3 ft., Swope Park, City Health Department.

St. Louis, Mo.—Site 1—C, 58 ft., Post Office, 18th & Market Sts., City Division of Health, Department of Public Welfare.

Site 2—R, 25 ft., Wohl Health Center, City Division of Health, Department of Public Welfare.

Brentwood, Mo.**—C, 30 ft., City Hall, St. Louis County Health Department.

Breckenridge, Mo.**—C I R, 75 ft., Telephone Building, Woodson & Charles Sts., St. Louis County Health Department .

Omaha, Nebr.**—C, 115 ft., City Hall, 18th & Farnam Sts., City Smoke Abatement Division, Department of Public Safety.

Lincoln, Nebr.** — C, 30 ft., 1401 "O" Street, City-County Health Department.

Bismarck, N. D.* — C, 40 ft., Memorial Building, 216 Sixth St., City Department of Health & Building Inspection.

Sioux Falls, S. D.**—C, 55 ft., City Hall, 8th & E. Sts., City Health Department.

GULF SOUTH

Little Rock, Ark.** — R C, 50 ft., State Health Department Building, West Capitol Ave. & Wolfe St., State Health Department.

New Orleans, La.—Site 1—C I, 80 ft., City Hall Annex, Carondelet & Lafayette Sts., State Health Department.

Site 2—Park R, 57 ft., Southern Regional Research Laboratory, Robert E. Lee Blvd. & City Park, State Health Department.

Site 3—C I, 74 ft., Post Office Building, Lafayette & Camp Sts., State Health Department.

Baton Rouge, La.** — C, 14 ft., Health Clinic Building, 1819 Florida Street, East Baton Rouge Parish Health Unit.

Albuquerque, N. M.**—C I, 15 ft., Health Department Building, 2nd & Copper Sts., City Health Department.

Tulsa, Okla.*—C, Health Center, 4616 East 15th St., City-County Health Department.

Ft. Worth, Tex.—C, 60 ft., City Hall, 9th & Monroe Sts., City Health Department.

Lakeworth Village, Tex. — R, 15 ft., Fire Station, Ft. Worth Health Department.

Houston, Tex.—Site 1—I C, 85 ft., Police Department Building, City Health Department.

Site 2—C, 30 ft., Auditorium, 2300 Commerce St., City Health Department.

Bellaire, Tex.—C R I, 20 ft., Post Office Building, Houston Health Department.

Dallas, Tex.**—C I, 30 ft., Health Department Building, 601 So. Akard St., City Health Department.

San Antonio, Tex.** — C I, 20 ft., City

Water Board Building, 106 W. Market St., City Health Department.

El Paso, Tex.**—C I, 34 ft., Health Department Building, 118 W. Missouri St., City-County Health Unit.

Corpus Christi, Tex.**—C R, 18 ft., Memorial Hospital, 2606 Hospital Blvd., City-County Health Department.

ROCKY MOUNTAIN

Denver, Colo.—C I, 60 ft., School Administration Building, 14th & Tremont Sts., Division of Air Pollution Inspection, City Building Department.

Boise, Idaho**—C, 50 ft., Central Fire Station, 6th & Idaho Sts., City-County Health Department.

Helena, Mont.**—R C, 20 ft., State Laboratories Building, Lockey Ave. & N. Roberts St., State Board of Health.

Salt Lake City, Utah—I C, 60 ft., Police Station Building, 2nd St. W. & S. 9th St., City Board of Health.

Cheyenne, Wyo.*—C R, 53 ft., State Office Building, 24th & Warren Ave., State Department of Health.

PACIFIC COAST

Anchorage, Alaska—Site 1—C, 15 ft., City Fire Hall, Arctic Health Research Center, Public Health Service.
Site 2—C, 30 ft., Arctic Health Research Center, 6th Ave. & L St., Public Health Service.

Phoenix, Ariz.**—C, Central Fire Station, Washington & 3rd Ave., Maricopa County Health Department.

Los Angeles, Calif.—Site 1—I, 15 ft., Vernon Area, 5201 Santa Fe, Los Angeles County Air Pollution Control District.
Site 2—R, 4 ft., North Hollywood, Los Angeles County Air Pollution Control District.
Site 3—C, 3 ft., Pershing Square, 6th & Olive, Los Angeles County Air Pollution Control District.

San Francisco, Calif.—Site 1—14 ft., Ft. Miley Military Reservation, City Health Department.
Site 2—C, 32 ft., San Francisco Health Department Building, 101 Grove St., City Health Department.

Pasadena, Calif.—Park R, 3 ft., Memorial Park, Holly & Raymond Sts., Los Angeles County Air Pollution Control District and California Institute of Technology.

Berkeley, Calif.—C, 12 ft., Berkeley Park, State Health Department.

San Jose, Calif.—C R, 14 ft., County Health Center, 2220 Moorpark Ave., Santa Clara County Health Department.

San Leandro, Calif.—R, 32 ft., Alameda County Health Department Building, 15000 Foothill Blvd., Alameda County Health Department.

San Diego, Calif.**—C I, 44 ft., Public Library Building, 820 East St., City Health Department.

Burbank, Calif.**—C, 6 ft., Burbank Blvd. & Sparks St., Los Angeles County Air Pollution Control District.

San Bernardino, Calif.**—C R, 2 ft., Court House Building, 172 W. Court Street, San Bernardino County Air Pollution Control District.

Honolulu, Hawii* — Site 1 — C R, 15 ft., Kapuaiwa Building, Hawaii Department of Health.
Site 2—C R, Kapahula Health Center, Hawaii Department of Health.

Las Vegas, Nev.**—C, 30 ft., Fire Alarm Building, 1235 S. Main St., Clark County Health Department.

Portland, Ore.—Site 1—C, 125 ft., State Office Building, 1400 S. W. 5th Ave., Oregon State Air Pollution Authority.
Site 2—I, 45 ft., Guilds Lake, Oregon State Air Pollution Authority.
Site 3—R, 50 ft., Rigler School, Oregon State Air Pollution Authority.
Site 4—I, 30 ft., Fire Station No. 16, Oregon State Air Pollution Authority.
Site 5—I R, 45 ft., Fire Station No. 30, Oregon State Air Pollution Authority.
Site 6—Fire Station No. 25, Oregon State Air Pollution Authority.

Seattle, Wash.—C I, 51 ft., 7th Ave. So. & Charles St., City Department of Eng.

TABLE D. SAMPLING SITE DESCRIPTIONS AND PARTICIPATING ORGANIZATIONS

SUBURBAN STATIONS

NEW ENGLAND

Middlesex County, Mass.—R, 40 ft., Oak Hill Fire Station, State Health Department.

MID ATLANTIC

Lakehurst, N. J.—R, 29 ft., General Service Building, Naval Air Station, State Health Department.

MID EAST

Kanawha County, W. Va. — RU, 35 ft., Charleston Airport, State Health Department.

SOUTH EAST

Hillsborough County, Fla.—R, 75 ft., Tampa Airport, City of Tampa Bureau of Sanitary Sewers, Department of Public Works.

Fulton County, Ga.—R, 35 ft., Atlanta Airport,—RU, 9 ft., Fulton County Farm, Fulton County Health Department.

MID WEST

Hamilton County, O.—RU, 15 ft., Winton Woods, Robert A. Taft Sanitary Engineering Center, Public Health Service.

GREAT PLAINS

Tonka Bay, Minn.—R, Interlachen Road, Tonka Bay Village, State Health Department

Edina, Minn.**—R, 5 ft., 6333 Ryan Ave., State Health Department.

ROCKY MOUNTAIN

Denver County, Colo.—R, 50 ft., Moffat Water Filtration Plant, Denver Department of Air Pollution Control.

Salt Lake County, Utah—R, Police Department Rifle Range & Division of Occupational Health Field Station, Public Health Service, and Salt Lake City Health Department.

PACIFIC COAST

Multnomah County, Ore.—RU, 25 ft., Hill Military Academy, State Health Department.

TABLE D. SAMPLING SITE DESCRIPTIONS AND PARTICIPATING ORGANIZATIONS

NONURBAN STATIONS

NEW ENGLAND

Connecticut—Litchfield County**, Wigwam Reservoir, Farmland, Waterbury Health and Water Departments.

Maine—Acadia National Park**, Atlantic, 37 ft., National Park Service.

Vermont—Mt. Mansfield State Forest**, 1100 ft., State Health Department.

MID EAST

Maryland—Worcester County**, Farmland, 96 ft., Worcester County Health Department and State Health Department.

North Carolina—Cape Hatteras National Seashore Recreational Area**, Atlantic, 7 ft., National Park Service.

Virginia — Shenandoah National Park**, Forest 3000 ft., National Park Service.

West Virginia—Holly River State Park**, Mountain, 1503 ft., State Conservation Commission and State Health Department.

SOUTH EAST

Alabama—Gulf Shores State Park**, 6 ft., Baldwin County Health Department and State Park Service.

Florida—Florida Keys**, Atlantic, Monroe County Health Department.
Georgia—Oatland Island**, Chatham County, Atlantic, 11 ft., Communicable Disease Center Laboratories, Public Health Service.
Mississippi—Jackson County**, Gulf, 6 ft., State Institutions of Higher Learning, Gulf Coast Research Laboratory.
Tennessee—Ft. Donelson National Military Park**, Farmland, 490 ft., National Park Service.

MID WEST

Illinois—Sangamon County**, Lake Springfield, Farmland, 590 ft., State Health Department.
Michigan—Huron County**, Sleeper State Park, Great Lakes, 600 ft., State Conservation Department and State Health Department.
Ohio—Perry's Victory and International Peace Memorial**, Great Lakes, 590 ft., National Park Service.

GREAT PLAINS

Kansas—Ellis County**, Farmland, 2014 ft., State Health Department.
Minnesota—Cook County**, Great Lakes, 630 ft., National Forest Service.
Missouri — Shannon County**, Missouri State Forest, 1375 ft., State Conservation Commission and State Health Department.
Nebraska—Thomas County**, Farmland, U. S. Forest Service.
North Dakota — Ward County**, Upper Souris National Wildlife Refuge, Farmland, 1500 ft., U. S. Fish and Wildlife Service.
South Dakota—Black Hills National Forest**, 5000 ft., U. S. Forest Service.

ROCKY MOUNTAIN

Wyoming — Yellowstone National Park**, Mountain, 5965 ft., National Park Service.

PACIFIC COAST

Alaska—Pt. Woronzof, Cook Inlet, Forest, 190 ft., Arctic Health Research Center, Public Health Service.
Arizona—Grand Canyon National Park**, Desert, 6975 ft., National Park Service.
Hawaii—Waimanalo**, Bellows Fields, Pacific, 14 ft., Territorial Health Department.

HOW TO FIND DATA FROM A PARTICULAR CITY OR SITE

In order to facilitate the location of data from a particular city or site in the numerous data tables, use is made of the list of sampling sites (Table D) rather than a separate index. Although some exceptions to the following rules occur, for the most part they will serve as a satisfactory guide to the finding of data for each site listed. If the name of the station is not followed by an asterisk data for that station are found in practically all tables. If the name is followed by an asterisk, data from that station may be found only in Tables 1 to 8. Data from stations marked with two asterisks will be found only in Tables 1 to 4.

Data for suburban and nonurban sites are listed together in Table 2 and Tables 5 through 31 due to the small number of stations involved.

EXPLANATION OF UNITS USED IN DATA TABLES

Normally, concentrations of particulate atmospheric pollutants are expressed in micrograms per cubic meter of air with the exception of radioactivity which is reported as micromicrocuries per cubic meter. To improve the legibility of the tables the data for all pollutants are given as whole numbers without decimal points or leading zeros and, except in Table 1, must be adjusted for the units noted in the table heading. For example, in the table for acetone soluble matter, the concentration is expressed as $\mu g/m^3$ x 10^{-1}, which means that to obtain the value in $\mu g/m^3$ the tabular data should be multiplied by 10^{-1} or 1/10 in each case. Units used in all data tables and conversion of these to the common units are shown in Table E. The minimum detectable amount for each pollutant (by the method of analysis employed) is also shown in this table.

TABLE E. UNITS USED IN DATA TABLES

Pollutant	Unit used in table	Value as found in table	Corresponding value in $\mu g/m^3$	Minimum detectable quantity $\mu g/m^3$
Suspended Particulates	μg	482	482.0	1.0
Acetone Solubles	μg x 10^{-1}	324	32.4	0.1
Benzene Solubles	μg x 10^{-1}	198	19.8	0.1
Radioactivity	μμc x 10^{-1}	4318	431.8*	0.1*
Chlorides	μg x 10^{-1}	112	11.2	0.1
Fluorides	μg x 10^{-2}	211	2.11	0.01
Nitrates	μg x 10^{-1}	64	6.4	0.1
Sulfates	μg x 10^{-1}	319	31.9	0.1
Antimony	μg x 10^{-3}	100	0.100	0.025
Arsenic	μg x 10^{-2}	102	1.02	0.01
Barium	μg x 10^{-3}	230	0.230	0.005
Beryllium	μg x 10^{-3}	11	0.011	0.003
Bismuth	μg x 10^{-3}	32	0.032	0.002
Cadmium	μg x 10^{-3}	24	0.024	0.002
Chromium	μg x 10^{-3}	48	0.048	0.002
Cobalt	μg x 10^{-3}	20	0.020	0.003
Copper	μg x 10^{-2}	168	1.68	0.01
Iron	μg x 10^{-1}	81	8.1	0.1
Lead	μg x 10^{-1}	46	4.6	0.1
Magnesium	μg x 10^{-1}	35	3.5	0.1
Manganese	μg x 10^{-2}	75	0.75	0.01
Molybdenum	μg x 10^{-2}	12	0.12	0.01
Nickel	μg x 10^{-3}	40	0.040	0.002
Potassium	μg x 10^{-1}	16	1.6	0.1
Silver	μg x 10^{-4}	15	0.0015	0.0005
Sodium	μg x 10^{-1}	57	5.7	0.1
Strontium	μg x 10^{-2}	43	0.43	0.01
Tin	μg x 10^{-3}	123	0.123	0.003
Titanium	μg x 10^{-2}	48	0.48	0.01
Vanadium	μg x 10^{-2}	51	0.51	0.01
Zinc	μg x 10^{-2}	550	5.50	0.05

*Radioactivity is expressed in $\mu\mu c/m^3$.

DATA TABLES

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	54	12	11	174	94	11	40	76	89	94	100	105	134	145
	1	55	31	54	330	169	94	110	123	145	176	191	206	221	236
	1	56	45	72	454	189	92	105	132	145	171	188	219	257	327
	1	54 56	88	11	454	169	80	99	115	134	155	180	199	223	278
HARTFORD CONN	1	57	26	35	314	124	55	79	89	105	116	127	136	158	201
NEW HAVEN CONN	1	57	23	51	201	100	52	60	65	92	100	105	114	123	162
STAMFORD CONN	1	57	26	20	247	112	40	67	74	93	100	123	134	179	194
PORTLAND MAINE	1	57	18	46	265	121	47	80	85	97	114	130	145	154	171
BOSTON MASS	1	54	12	119	219	150	111	117	127	132	136	141	145	186	201
	1	55	51	57	388	126	73	86	94	100	110	123	137	155	213
	1	56	46	66	472	155	83	92	109	123	145	164	178	194	236
	1	57	26	72	214	137	83	89	105	117	132	145	162	191	210
	1	54 57	135	57	472	140	80	91	102	114	128	140	160	183	219
PITTSFIELD MASS		55	9	47	103	78	47	60	65	71	76	76	93	97	101
		56	19	36	92	57	36	38	40	51	58	60	65	76	85
		55 56	28	36	103	64	37	40	47	57	62	68	76	85	95
EVERETT MASS	1	54	13	33	226	104	34	55	71	76	105	123	134	145	201
	1	55	52	39	353	122	65	74	90	97	104	117	136	171	210
	1	56	43	61	293	137	78	87	107	116	129	142	154	165	216
	1	54 56	108	33	353	126	66	79	90	102	115	129	147	165	207
LAWRENCE MASS	1	57	26	21	186	74	34	38	50	55	65	76	94	102	130
LYNN MASS	1	57	21	43	253	108	47	65	76	81	89	114	134	154	171
SOMERVILLE MASS	1	57	26	37	191	87	45	50	58	65	80	94	105	119	145
WORCESTER MASS	1	57	28	34	219	106	44	60	71	94	110	123	136	145	161
MANCHESTER N H	1	57	17	40	152	70	44	47	52	58	65	68	73	97	105
PROVIDENCE R I	1	54	12	37	208	92	40	69	76	79	81	84	86	105	145
	1	55	11	57	289	153	65	89	114	123	145	171	201	219	236
	1	57	27	73	253	115	81	86	94	102	111	117	127	138	145
	1	54 57	50	37	289	118	73	81	87	96	107	119	130	143	201
	2	54	11	17	133	57	18	21	29	34	47	51	55	89	123
	2	55	12	19	78	43	21	25	37	40	42	45	47	65	76
	2	54 55	23	17	133	50	20	29	34	40	44	47	52	65	89
		54	23	17	208	76	21	40	47	55	76	80	85	89	134
		55	23	19	289	96	25	40	45	55	76	89	123	145	219
		57	27	73	253	115	81	86	94	102	111	117	127	138	145
		54 57	73	17	289	97	34	47	69	80	88	103	117	132	171
BURLINGTON VT	1	57	26	24	83	52	34	36	40	44	49	55	65	72	76
WILMINGTON DEL	1	57	26	77	481	188	94	110	119	138	162	186	236	264	311
ATLANTIC CITY N J	1	54	6	55	240	113	55	55	65	65	105	114	114	123	123
	1	55	11	87	225	133	83	89	105	114	134	145	154	162	171
	1	54 55	17	55	240	126	65	83	97	110	119	123	145	162	171
HIGHTSTOWN N J	1	54	2	63	72	67			65	65	65	65	65	76	76
	1	55	8	25	107	62	25	40	40	55	65	76	83	83	89
	1	54 55	10	25	107	63	25	40	55	60	65	71	76	83	89
GLEN GARDNER N J	1	54	6	24	149	59	23	23	25	25	37	40	40	89	89
	1	55	6	19	116	50	21	21	25	25	29	55	55	76	76
	1	54 55	12	19	149	55	21	22	25	29	37	40	55	89	123
RED BANK N J	1	54	4	35	116	76		40	40	76	76	76	89	89	123
	1	55	5	41	111	77	47	47	76	76	83	83	89	89	123
	1	54 55	9	35	116	76	40	47	71	76	80	80	85	89	114
ELIZABETH N J	1	55	28	55	250	116	71	85	91	97	103	112	123	134	201
	1	56	14	37	137	77	40	55	65	69	72	74	89	105	123
	1	55 56	42	37	250	103	55	68	76	89	96	103	113	127	145
PAULSBORO N J	1	55	33	38	236	101	55	71	79	89	102	111	120	130	145
	1	56	19	73	224	125	76	89	110	119	126	129	136	142	171
	1	55 56	52	38	236	110	65	74	87	100	110	119	128	138	154
CAMDEN N J	1	55	30	61	376	151	76	97	112	123	132	142	158	201	216
	1	56	18	118	368	219	171	181	186	195	213	236	253	261	278
	1	57	26	54	352	210	130	145	161	171	201	236	253	278	311
	1	55 57	74	54	376	188	94	123	138	154	177	198	228	257	303
PERTH AMBOY N J	1	55	31	42	217	93	55	63	71	77	83	88	97	114	158
	1	56	17	33	217	115	47	69	76	105	127	132	141	158	171
	1	55 56	48	33	217	101	55	67	73	80	98	100	123	138	145
TRENTON N J	1	55	21	55	971	150	65	72	79	84	94	105	123	171	201
	1	56	18	39	730	158	76	89	94	105	114	123	138	145	278
	1	55 56	39	39	971	154	68	78	85	94	105	114	129	158	257
JERSEY CITY N J	1	54	3	232	329	267		236	236	236	278	278	278	278	355
	1	55	34	71	314	169	94	105	119	145	161	179	206	221	257
	1	56	18	80	343	176	105	134	140	154	171	183	195	201	256
	1	57	26	99	311	166	111	123	132	139	152	171	183	201	236
	1	54 57	81	71	343	173	100	118	132	145	165	182	199	221	261

Preceding page blank

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST ORANGE N J	1	57	20	26	366	121	29	37	51	76	123	145	155	166	201
NEWARK N J	1	57	18	55	340	139	65	89	94	105	114	123	158	171	201
NEW YORK N Y	1	57	25	94	330	197	105	138	155	166	186	201	227	278	315
	2	53	3	184	642	371		201	201	201	327	327	327	327	737
	2	54	30	145	399	241	171	194	208	219	229	243	264	290	327
	2	55	40	93	466	236	123	141	171	195	227	254	278	334	363
	2	56	32	120	346	223	134	179	204	211	219	226	234	268	327
	2	53 56	105	93	642	237	136	173	195	210	224	238	263	303	349
	3	53	3	87	146	110		89	89	89	105	105	105	105	171
	3	54	36	79	350	180	97	112	130	151	162	171	195	264	298
	3	55	38	44	335	161	83	97	105	145	160	176	196	219	257
	3	56	26	71	379	192	89	100	145	154	167	186	250	278	356
	3	53 56	103	44	379	174	87	101	126	150	161	173	196	249	299
	4	54	2	162	164	163			158	158	158	158	158	171	171
	4	55	24	44	238	136	68	76	105	123	134	145	165	181	219
	4	54 55	26	44	238	138	71	76	111	123	140	154	162	181	201
		53	6	87	642	241	89	89	105	105	171	201	201	327	327
		54	68	79	399	205	112	145	159	174	198	217	241	273	311
		55	102	44	466	185	89	105	131	151	169	190	219	257	327
		56	58	71	379	209	105	138	162	191	210	222	236	272	335
		57	25	94	330	197	105	138	155	166	186	201	227	278	315
		53 57	259	44	642	198	97	127	149	166	187	209	232	266	320
BINGHAMTON N Y	1	57	26	54	224	94	58	65	72	76	89	99	105	119	130
BUFFALO N Y	1	57	6	70	388	166	71	71	76	76	105	171	171	236	236
	2	57	15	80	607	241	123	130	145	158	181	191	278	327	580
		57	21	70	607	220	76	105	130	145	171	191	236	327	453
SCHENECTADY N Y	1	57	22	38	143	77	47	51	58	65	76	85	92	102	123
SYRACUSE N Y	1	57	26	40	347	119	47	65	80	89	105	123	134	158	186
UTICA N Y	1	57	24	44	228	120	60	69	74	100	114	130	158	179	201
PHILADELPHIA PA	1	53	8	92	414	265	105	201	201	236	257	278	385	385	419
	1	54	75	37	760	202	87	108	130	153	174	198	226	257	366
	1	55	289	56	576	210	117	144	157	170	196	217	241	279	319
	1	56	307	66	761	220	128	148	167	184	200	217	234	271	325
	1	53 56	679	37	761	214	116	143	159	176	197	216	236	274	325
	2	54	6	339	696	533	385	385	533	533	564	596	596	627	627
	2	55	19	158	550	345	236	264	286	303	319	327	408	453	506
	2	54 55	25	158	696	390	250	278	303	319	385	430	493	533	604
	3	53	6	71	376	170	71	71	76	76	89	219	219	236	236
	3	54	26	29	382	128	67	71	76	89	111	127	136	158	201
	3	55	14	94	238	145	93	101	105	117	123	154	171	181	201
	3	53 55	46	29	382	132	69	75	92	102	117	136	155	186	224
	4	55	27	182	621	311	194	207	224	247	278	303	356	430	480
	4	56	233	51	1011	286	135	167	193	218	243	266	301	370	518
	4	57	25	86	323	203	134	145	165	181	207	219	236	257	294
	4	55 57	285	51	1011	281	140	168	195	217	240	264	298	361	499
	5	55	24	44	327	127	55	78	83	89	97	105	130	145	278
	5	56	41	66	563	178	80	89	112	129	152	167	208	236	311
	5	55 56	65	44	563	159	77	84	94	110	129	149	181	224	298
	6	55	12	84	271	177	89	134	154	162	171	201	210	227	236
	6	56	42	91	581	192	125	131	140	149	167	181	194	222	303
	6	55 56	54	84	581	189	124	133	141	154	168	183	201	220	278
	7	55	6	135	316	240	145	145	201	201	236	294	294	311	311
	7	56	38	76	910	229	94	132	145	162	191	216	236	268	385
	7	55 56	44	76	910	230	94	134	149	171	201	219	247	288	385
		53	14	71	414	224	71	89	105	213	224	236	278	356	419
		54	107	29	760	203	76	94	116	137	160	186	220	268	385
		55	391	44	621	215	107	137	156	172	200	223	252	290	331
		56	661	51	1011	239	123	146	166	186	207	228	256	298	401
		57	25	86	323	203	134	145	165	181	207	219	236	257	294
		53 57	1198	29	1011	227	108	138	158	178	202	223	251	292	373
ALTOONA PA	1	55	3	82	125	100		89	89	89	105	105	105	105	145
	1	56	24	61	411	128	71	80	83	89	117	127	141	158	191
	1	55 56	27	61	411	125	76	79	84	89	117	127	138	158	181
BRISTOL PA	1	55	31	27	229	96	47	65	73	81	92	100	108	117	145
	1	56	12	52	177	107	55	65	89	97	105	114	123	145	171
	1	55 56	43	27	229	99	51	68	78	85	95	103	112	121	158
CHESTER PA	1	55	31	40	273	134	76	94	102	123	136	145	158	171	194
	1	56	13	38	323	136	40	65	76	97	123	158	171	186	236
	1	55 56	44	38	323	135	65	91	99	117	132	145	161	176	201
ERIE PA	1	55	1	90	90	90					105	105	105	105	105
	1	56	49	25	550	80	36	42	46	53	63	70	77	85	97
	1	55 56	50	25	550	80	36	42	46	53	63	71	79	86	99

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
PITTSBURGH PA	1	56	71	43	311	134	68	83	95	104	121	134	150	184	222
	2	57	23	78	534	203	85	100	134	158	181	191	201	257	419
		56 57	94	43	534	150	73	89	99	111	129	143	176	196	253
WILLIAMSPORT PA	1	55	6	85	268	178	89	89	145	145	171	219	219	236	236
	1	56	40	74	515	213	123	152	165	179	194	215	247	285	313
	1	55 56	46	74	515	209	123	148	162	175	194	216	236	278	306
ALLENTOWN PA	1	57	20	41	214	111	55	71	83	105	111	117	123	145	171
JOHNSTOWN PA	1	57	11	33	268	165	34	97	105	130	145	219	236	250	264
LANCASTER PA	1	57	11	65	199	113	65	76	83	89	105	130	138	145	171
SCRANTON PA	1	57	26	62	466	176	76	89	101	114	134	186	219	264	303
WASHINGTON DC	1	53	10	93	276	162	105	114	123	130	138	145	171	236	257
	1	54	34	66	186	119	83	96	103	111	117	123	134	142	165
	1	53 54	44	66	276	129	89	99	107	115	121	129	139	150	186
	2	55	47	70	263	161	114	129	138	147	159	169	181	194	210
	2	56	23	84	459	192	123	136	145	158	177	189	201	224	303
	2	55 56	70	70	459	171	117	131	140	150	162	175	187	199	231
	3	56	14	67	198	104	69	76	91	96	98	100	105	114	145
	3	57	26	41	258	94	55	62	76	81	89	99	105	119	130
	3	56 57	40	41	258	97	58	69	79	89	94	100	105	117	134
		53	10	93	276	162	105	114	123	130	138	145	171	236	257
		54	34	66	186	119	83	96	103	111	117	123	134	142	165
		55	47	70	263	161	114	129	138	147	159	169	181	194	210
		56	37	67	459	159	89	96	105	127	141	158	181	201	236
		57	26	41	258	94	55	62	76	81	89	99	105	119	130
		53 57	154	41	459	140	76	95	106	120	131	142	159	180	210
LOUISVILLE KY	1	54	22	72	384	192	105	123	145	171	180	188	197	278	311
	1	55	29	82	353	192	111	130	149	162	177	189	213	250	303
	1	56	22	81	219	129	92	99	109	116	123	132	141	158	171
	1	57	1	130	130	130					145	145	145	145	145
	1	54 57	74	72	384	172	98	114	127	141	156	171	189	215	238
	2	54	13	65	260	138	65	94	100	105	130	138	145	186	236
	2	55	16	59	234	150	65	105	123	134	154	171	181	201	213
	2	56	5	48	159	114	55	55	114	114	123	123	145	145	171
	2	54 56	34	48	260	140	62	97	109	123	134	145	171	189	219
	3	54	5	78	124	103	89	89	97	97	105	105	123	123	145
	4	57	16	115	358	209	145	154	171	181	201	224	236	264	278
		54	40	65	384	163	89	100	114	129	142	174	188	201	278
		55	45	59	353	177	105	119	141	154	168	182	201	224	278
		56	27	48	219	126	92	99	108	115	123	130	141	155	166
		57	17	115	358	205	134	145	162	181	201	213	236	264	278
		54 57	129	48	384	166	94	109	123	137	153	170	188	213	262
BALTIMORE MD	1	56	28	104	729	247	123	145	162	183	201	227	290	315	430
	1	57	26	77	301	150	97	105	116	123	134	145	162	201	250
	1	56 57	54	77	729	200	100	117	130	145	167	188	222	268	327
CHARLOTTE NC	1	57	25	45	322	125	65	76	94	105	123	130	141	154	201
WINSTON SALEM NC	1	57	26	28	223	97	57	61	71	80	92	100	105	123	145
SAN JUAN PUERTO RICO	1	57	21	45	132	73	49	52	55	62	69	74	79	86	105
NORFOLK VA	1	57	25	60	168	111	83	89	101	107	112	116	121	130	154
RICHMOND VA	1	57	26	50	232	101	60	67	74	89	96	103	111	130	145
CHARLESTON W VA	1	53	6	101	764	296	105	105	111	111	117	123	123	627	627
	1	54	30	63	561	274	83	111	152	171	236	315	385	453	533
	1	53 54	36	63	764	277	89	108	120	158	224	315	385	480	557
	2	54	9	58	577	238	65	83	89	123	145	145	303	327	533
	2	55	32	67	793	292	73	89	134	171	294	337	366	430	560
	2	56	23	60	696	255	76	101	123	154	201	303	346	385	493
	2	57	23	44	655	207	58	76	85	97	123	186	278	385	493
	2	54 57	87	44	793	254	71	85	105	136	191	296	350	414	506
		53	6	101	764	296	105	105	111	111	117	123	123	627	627
		54	39	58	577	265	79	105	123	165	236	303	356	453	533
		55	32	67	793	292	73	89	134	171	294	337	366	430	560
		56	23	60	696	255	76	101	123	154	201	303	346	385	493
		57	23	44	655	207	58	76	85	97	123	186	278	385	493
		53 57	123	44	793	261	73	93	113	142	210	303	356	426	533
WHEELING W VA	1	56	11	96	419	180	94	100	105	123	145	158	171	236	385
	1	57	25	137	344	201	148	154	162	168	191	207	224	236	303
	1	56 57	36	96	419	195	123	140	152	159	169	201	216	236	303
BIRMINGHAM ALA	1	57	25	50	285	129	65	81	89	100	117	145	161	171	201
TAMPA FLA	1	53	5	69	377	151	76	76	89	89	105	105	145	145	385
	1	54	44	35	153	78	44	52	56	64	72	85	96	103	123
	1	55	44	33	172	101	67	76	83	91	96	101	111	123	152
	1	56	38	31	171	92	58	67	70	74	85	101	113	120	136
	1	57	26	34	168	79	55	62	68	71	76	83	87	97	105
	1	53 57	157	31	377	91	52	63	70	76	86	94	102	115	137

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
MIAMI FLA	1	57	25	31	106	63	44	49	53	56	60	63	71	79	89
ATLANTA GA	1	53	2	98	126	112			105	105	105	105	105	145	145
	1	54	42	55	261	141	89	100	114	125	135	145	160	183	213
	1	55	75	65	421	142	92	98	105	119	132	143	160	179	211
	1	56	34	62	319	153	79	89	108	118	130	150	171	213	278
	1	57	26	50	228	105	65	80	85	89	97	105	112	123	154
	1	53 57	179	50	421	138	83	94	103	114	126	140	156	175	214
	2	54	8	31	101	59	32	34	34	40	55	65	76	76	97
		53	2	98	126	112			105	105	105	105	105	145	145
		54	50	31	261	128	55	89	99	111	125	138	152	171	201
		55	75	65	421	142	92	98	105	119	132	143	160	179	211
		56	34	62	319	153	79	89	108	118	130	150	171	213	278
		57	26	50	228	105	65	80	85	89	97	105	112	123	154
		53 57	187	31	421	135	78	91	100	110	123	137	154	173	211
COLUMBUS GA	1	57	27	37	209	102	55	65	72	89	101	110	123	136	145
JACKSON MISS	1	57	24	15	198	76	21	49	53	60	65	76	86	105	145
COLUMBIA SC	1	57	24	55	209	111	65	84	89	95	99	103	132	141	171
GREENVILLE SC	1	57	29	46	285	107	58	65	76	86	94	100	123	145	171
CHATTANOOGA TENN	1	54	10	52	283	180	55	89	123	145	201	236	250	264	278
	1	55	10	115	350	227	114	123	145	171	236	257	278	327	356
	1	54 55	20	52	350	203	89	117	134	171	219	244	261	278	327
	2	54	32	25	336	107	32	40	55	72	100	123	136	162	191
	2	55	10	35	214	89	40	47	65	71	76	83	89	105	145
	2	54 55	42	25	336	102	33	42	60	72	89	105	130	154	191
	3	55	30	33	237	118	58	67	72	93	105	119	145	183	201
	3	56	24	71	264	151	80	105	117	134	145	155	171	191	250
	3	57	13	64	565	175	65	83	89	94	105	158	171	236	327
	3	55 57	67	33	565	141	66	75	91	105	123	145	168	194	236
	4	55	35	91	535	230	129	145	166	181	201	227	286	311	408
	4	56	24	92	644	255	145	181	201	222	236	253	278	303	385
	4	57	18	120	385	219	145	158	165	179	194	219	278	294	327
	4	55 57	77	91	644	235	134	154	173	192	214	236	278	308	356
		54	42	25	336	124	33	47	69	94	117	134	154	194	250
		55	85	33	535	174	66	83	110	129	156	182	210	253	320
		56	48	71	644	203	97	127	145	164	186	213	241	262	303
		57	31	64	565	200	83	100	145	158	179	201	236	290	327
		54 57	206	25	644	174	65	87	112	135	159	183	210	252	306
KNOXVILLE TENN	1	57	26	68	245	136	80	89	108	114	123	140	152	171	219
NASHVILLE TENN	1	57	28	71	317	135	83	92	99	111	127	141	155	156	191
CHICAGO ILL	1	54	31	44	678	250	94	111	134	171	219	257	294	346	564
	1	55	61	31	594	241	94	129	156	186	226	270	303	342	419
	1	56	11	146	626	321	158	171	201	257	303	327	419	453	533
	1	54 56	103	31	678	252	95	130	159	190	232	270	304	352	445
	2	54	33	104	865	322	145	194	224	250	278	344	368	408	564
	2	55	49	106	641	312	171	236	252	268	289	311	346	402	485
	2	56	14	200	508	323	201	236	250	278	294	311	356	385	493
	2	54 56	96	104	865	317	175	211	246	263	286	323	358	411	493
	3	54	36	15	317	119	49	58	71	84	97	134	158	171	213
	4	54	7	30	263	204	34	34	186	201	236	236	250	264	264
	4	55	94	14	539	183	67	99	129	150	173	194	228	261	309
	4	56	9	35	512	200	40	44	47	105	219	219	236	278	453
	4	54 56	110	14	539	186	62	94	129	153	179	201	233	262	309
	5	57	6	109	418	194	114	123	123	145	158	171	236	236	278
		54	109	15	865	223	62	93	127	162	191	224	260	327	408
		55	204	14	641	231	89	129	155	185	219	251	282	318	399
		56	34	35	626	290	47	186	219	250	271	298	356	419	493
		57	6	109	418	194	114	123	123	145	158	171	236	236	278
		54 57	355	14	865	234	78	116	152	181	215	249	279	326	419
EAST ST LOUIS ILL	1	55	19	80	357	226	145	177	189	201	215	222	236	311	346
	1	56	31	167	608	291	191	210	223	236	264	288	317	366	430
	1	55 56	50	80	608	266	175	194	209	223	236	271	303	337	385
	2	55	18	32	280	129	76	85	89	100	123	138	158	171	191
	2	56	33	68	311	147	76	99	108	115	134	154	167	186	236
	2	55 56	51	32	311	141	76	91	101	112	127	148	165	184	219
		55	37	32	357	179	83	94	129	154	179	190	208	236	315
		56	64	68	608	217	95	115	149	175	201	222	254	292	366
		55 56	101	32	608	203	89	110	138	166	189	210	234	287	337
SPRINGFIELD ILL	1	57	20	42	210	94	47	62	71	79	86	94	105	123	145

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55	20	121	852	334	154	171	213	236	327	350	373	453	627
	1	56	15	140	720	354	201	247	268	276	385	402	436	453	533
	1	57	20	66	978	306	123	145	236	250	264	278	311	385	493
	1	55 57	55	66	978	329	145	201	240	259	288	335	385	442	533
	2	55	22	69	677	282	145	155	171	247	268	294	327	385	453
	2	56	15	122	564	269	134	145	171	201	236	278	327	385	533
	2	57	22	74	545	224	105	152	171	186	201	224	257	303	327
	2	55 57	59	69	677	257	130	154	169	201	236	266	300	339	430
	3	55	20	91	350	197	100	129	140	171	201	219	236	257	278
	3	56	19	79	405	263	97	179	194	236	294	311	342	371	408
	3	57	18	63	442	216	123	145	158	179	194	213	236	278	327
	3	55 57	57	63	442	225	102	134	171	189	210	232	271	327	375
	4	55	18	76	410	203	89	117	123	179	194	219	257	278	311
	4	56	19	97	395	209	100	114	134	154	171	201	236	327	365
	4	57	20	55	345	187	65	105	145	177	189	201	224	257	303
	4	55 57	57	55	410	199	93	111	134	171	189	206	236	292	327
		55	80	69	852	256	114	145	168	201	229	259	299	350	419
		56	68	79	720	269	111	145	175	208	257	303	349	392	439
		57	80	55	978	233	105	141	171	189	211	236	267	300	366
		55 57	228	55	978	252	110	144	171	197	227	260	299	346	421
EVANSVILLE IND	1	57	25	13	170	97	65	69	76	89	97	102	123	130	141
FORT WAYNE IND	1	57	26	70	304	138	80	94	105	116	126	136	145	161	219
INDIANAPOLIS IND	1	57	26	87	260	149	109	116	126	132	142	155	166	183	195
DETROIT MICH	1	53	33	137	716	344	154	186	219	290	342	385	453	487	533
	1	54	19	173	743	334	186	201	264	288	307	317	356	408	453
	1	53 54	52	137	743	340	171	190	247	289	316	356	408	476	533
	2	56	30	89	344	169	110	123	136	148	155	163	171	215	236
	3	56	33	23	257	106	40	52	58	76	97	105	123	158	219
	4	57	23	48	303	148	89	105	112	119	138	154	171	201	236
		53	33	137	716	344	154	186	219	290	342	385	453	487	533
		54	19	173	743	334	186	201	264	288	307	317	356	408	453
		56	63	23	344	136	50	76	98	113	134	151	162	201	228
		57	23	48	303	148	89	105	112	119	138	154	171	201	236
		53 57	138	23	743	215	76	107	127	152	170	206	248	314	430
GRAND RAPIDS MICH	1	57	18	86	355	154	85	93	97	105	117	145	171	219	278
KALAMAZOO MICH	1	57	25	37	181	83	44	47	55	62	76	89	95	105	158
LANSING MICH	1	57	26	34	152	91	52	60	72	79	86	105	110	118	123
FLINT MICH	1	57	26	70	235	134	85	97	110	115	123	136	145	171	191
CINCINNATI OHIO	1	53	18	109	444	217	117	129	134	145	171	201	236	327	365
	1	54	89	52	656	155	89	108	119	130	144	156	169	187	224
	1	55	46	106	430	193	120	131	145	155	168	195	219	250	278
	1	56	44	71	507	190	100	125	135	154	179	194	216	236	294
	1	57	26	72	237	134	85	94	110	119	134	148	155	165	171
	1	53 57	223	52	656	172	98	115	127	140	153	168	187	215	270
	2	53	4	32	328	149		34	34	123	123	123	145	145	365
	2	54	59	39	534	120	60	73	80	87	102	115	132	154	191
	2	55	5	94	196	151	105	105	123	123	171	171	186	186	201
	2	53 55	68	32	534	124	60	74	81	89	107	121	140	160	195
	3	53	3	80	249	139		83	83	83	89	89	89	89	278
	3	54	70	32	364	97	55	61	69	77	86	96	105	121	152
	3	55	12	26	175	101	29	51	76	93	97	101	105	162	171
	3	53 55	85	26	364	99	52	61	71	79	89	97	107	127	194
	4	54	42	17	570	176	76	96	111	134	154	171	201	230	327
	4	55	10	52	296	134	55	76	83	89	97	105	171	201	236
	4	54 55	52	17	570	168	71	91	101	123	149	167	195	226	311
		53	25	32	444	196	89	114	127	136	158	186	236	327	365
		54	260	17	656	135	62	77	90	103	117	134	153	175	250
		55	73	26	430	167	83	105	123	142	157	169	191	221	271
		56	44	71	507	190	100	125	135	154	179	194	216	236	294
		57	26	72	237	134	85	94	110	119	134	148	155	165	171
		53 57	428	17	656	149	69	86	102	117	133	150	168	195	251
YOUNGSTOWN OHIO	1	56	20	88	651	233	105	112	119	134	181	201	303	385	430
	1	57	26	63	406	180	76	94	123	132	145	191	213	257	303
	1	56 57	46	63	651	203	89	105	120	132	171	196	236	303	365
CANTON OHIO	1	57	26	70	304	182	110	119	134	145	171	208	222	250	278
CLEVELAND OHIO	1	57	26	87	314	185	111	123	145	158	177	195	213	250	278
COLUMBUS OHIO	1	57	29	77	310	186	123	136	152	171	186	196	215	236	251
TOLEDO OHIO	1	57	26	48	311	124	65	71	80	89	105	134	150	166	201
LORAIN OHIO	1	57	26	55	398	156	72	83	109	116	127	141	158	236	303
MILWAUKEE WIS	1	57	25	64	367	162	89	105	116	123	140	154	186	219	278
RACINE WIS	1	57	23	56	273	143	62	89	111	123	140	154	171	186	250

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
DES MOINES IOWA	1	57	26	77	458	176	94	105	123	150	166	181	191	210	227
KANSAS CITY KANSAS	1	55	24	100	470	222	130	176	186	201	213	224	250	278	315
	1	57	8	93	299	157	105	123	123	130	138	145	171	171	201
	1	55 57	32	93	470	206	123	134	171	184	197	213	230	278	307
	2	56	25	30	463	115	51	58	65	76	89	94	102	145	278
		55	24	100	470	222	130	176	186	201	213	224	250	278	315
		56	25	30	463	115	51	58	65	76	89	94	102	145	278
		57	8	93	299	157	105	123	123	130	138	145	171	171	201
		55 57	57	30	470	166	60	80	97	126	145	180	207	247	298
WICHITA KANSAS	1	57	26	41	332	103	85	63	72	80	94	109	116	130	145
MINNEAPOLIS MINN	1	53	9	77	282	160	83	89	114	123	145	145	186	201	278
	1	54	46	45	272	110	58	72	83	94	107	117	129	140	161
	1	55	95	41	292	124	68	83	96	105	115	125	140	158	191
	1	56	46	46	223	107	63	71	90	96	102	111	119	136	162
	1	57	27	42	722	147	55	76	89	99	114	129	145	181	201
	1	53 57	225	41	722	122	63	77	91	100	110	120	135	153	188
DULUTH MINN	1	57	25	25	401	126	55	71	81	86	114	127	141	158	219
KANSAS CITY MO	1	53	6	27	61	49	29	29	49	49	51	53	53	55	55
	1	54	3	48	90	72		55	55	55	89	89	89	89	105
	1	53 54	9	27	90	56	29	49	50	52	53	53	55	65	89
	2	54	17	57	237	145	94	100	110	119	152	158	171	191	201
	2	55	31	44	528	217	111	127	141	162	207	224	247	278	327
	2	56	33	107	541	258	123	165	186	207	230	264	327	371	426
	2	57	26	70	436	173	105	127	138	145	171	182	190	201	236
	2	54 57	107	44	541	208	180	125	145	165	185	203	229	270	371
	3	53	4	48	79	66		55	55	65	65	65	83	83	89
	3	54	19	52	188	99	65	69	74	89	95	99	105	138	158
	3	53 54	23	48	188	94	55	67	72	76	89	95	102	130	158
	4	55	33	12	374	110	41	47	55	71	85	105	145	165	201
	4	56	16	42	490	151	60	65	72	76	97	123	171	201	303
	4	55 56	49	12	490	123	44	52	67	74	89	105	150	177	236
		53	10	27	79	55	29	49	50	52	53	55	60	65	83
		54	39	48	237	117	65	74	91	98	105	119	145	162	186
		55	64	12	528	162	45	68	89	119	141	164	201	231	303
		56	49	42	541	223	72	110	150	176	201	224	278	342	412
		57	26	70	436	173	105	127	138	145	171	182	190	201	236
		53 57	188	12	541	164	54	74	97	119	145	169	193	227	309
ST LOUIS MO	1	55	27	105	352	200	123	154	174	184	194	201	222	250	278
	1	56	43	118	800	250	145	178	191	207	236	251	267	286	327
	1	57	25	95	332	182	114	129	145	162	181	191	210	227	264
	1	55 57	95	95	800	218	129	154	176	187	200	220	243	266	309
	2	55	25	99	375	192	114	129	145	171	201	211	226	236	268
	2	56	42	111	430	224	127	145	171	191	208	222	236	303	346
	2	55 56	67	99	430	212	123	138	160	184	205	217	232	271	319
		55	52	99	375	196	111	136	166	181	194	207	221	242	272
		56	85	111	800	237	137	161	183	199	219	236	265	294	346
		57	25	95	332	182	114	129	145	162	181	191	210	227	264
		55 57	162	95	800	215	124	145	172	186	201	219	236	267	313
BRENTWOOD MO	1	55	15	46	203	115	65	71	97	105	114	119	134	145	201
	1	56	17	62	157	96	69	72	79	84	89	94	105	117	123
	1	55 56	32	46	203	105	65	72	81	89	99	108	115	130	158
BRECKENRIDGE MO	1	55	11	50	265	135	51	55	76	89	134	145	171	201	257
	1	56	15	70	398	205	111	117	145	181	201	219	250	264	327
	1	55 56	26	50	398	175	71	89	117	130	171	194	219	253	270
OMAHA NEB	1	57	26	77	194	122	89	94	100	105	114	123	134	154	171
LINCOLN NEB	1	57	26	65	248	132	76	89	101	111	127	138	145	181	201
BISMARCK ND	1	57	24	51	220	109	55	69	74	94	105	117	132	141	171
SIOUX FALLS SD	1	57	26	51	169	87	53	58	69	76	82	87	94	111	123
LITTLE ROCK ARK	1	57	26	34	170	83	42	47	60	63	76	86	97	123	134
NEW ORLEANS LA	1	54	26	44	775	107	51	57	63	71	80	87	92	100	105
	1	55	19	38	159	91	60	68	73	79	84	86	105	117	145
	1	54 55	45	38	775	100	55	61	69	76	82	87	96	105	145
	2	54	29	16	155	57	27	32	36	40	47	55	68	76	105
	2	55	44	26	115	62	36	44	49	55	59	63	76	82	89
	2	56	20	34	96	58	42	45	48	51	54	58	65	72	83
	2	54 56	93	16	155	59	33	39	45	50	56	62	69	79	89
	3	55	31	49	167	97	65	76	81	86	93	99	105	116	134
	3	56	21	62	249	128	65	76	89	105	130	145	158	171	201
	3	57	26	52	239	108	62	76	84	89	97	105	114	134	171
	3	55 57	78	49	249	109	63	77	83	90	98	107	120	139	167
		54	55	16	775	80	32	39	47	56	65	74	84	94	111
		55	94	26	167	79	42	53	60	69	78	83	89	101	119
		56	41	34	249	94	45	51	57	65	76	89	114	145	171
		57	26	52	239	108	62	76	84	89	97	105	114	134	171
		54 57	216	16	775	86	41	51	59	67	77	85	94	107	137

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
BATON ROUGE LA	1	57	24	70	316	170	76	114	130	149	156	164	186	236	303
ALBUQUERQUE NM	1	57	22	114	375	201	123	145	161	171	183	195	213	257	327
TULSA OKLA	1	57	20	22	268	87	40	49	52	55	72	83	97	123	145
FT WORTH TEXAS	1	53	3	79	154	117		89	89	89	123	123	123	123	171
	1	54	40	35	2928	183	55	76	86	95	103	126	139	154	171
	1	55	58	71	559	133	73	85	94	105	114	123	138	155	189
	1	56	46	55	1292	155	71	76	89	100	112	123	150	186	236
	1	53 56	147	35	2928	153	71	79	90	101	112	123	140	162	201
LAKEWORTH TEXAS	1	53	1	98	98	98					105	105	105	105	105
	1	54	32	10	513	136	47	60	83	97	110	123	150	171	236
	1	55	35	32	608	145	47	62	85	110	126	136	152	171	278
	1	53 55	68	10	608	140	47	63	81	100	116	133	151	168	236
HOUSTON TEXAS	1	53	11	38	301	168	40	76	105	145	181	191	201	236	278
	1	54	56	53	399	133	66	72	84	95	108	123	141	201	236
	1	55	61	56	292	138	77	86	96	107	118	130	145	186	250
	1	56	36	45	635	126	65	76	89	99	110	119	130	155	171
	1	53 56	164	38	635	136	68	80	91	103	114	126	147	184	236
	2	57	26	14	252	135	60	89	110	119	132	145	158	179	194
		53 57	190	14	635	136	67	80	93	105	116	130	150	182	233
BELLAIRE TEXAS	1	53	2	74	241	157			76	76	76	76	76	278	278
	1	54	22	36	246	136	83	97	110	115	120	145	155	171	219
	1	55	34	56	341	146	83	101	110	119	129	145	162	179	257
	1	56	7	67	508	195	71	71	76	89	105	105	171	385	365
	1	53 56	65	36	508	148	79	94	107	115	123	147	162	183	257
DALLAS TEXAS	1	57	25	18	243	119	44	71	93	101	114	123	152	165	201
SAN ANTONIO TEXAS	1	57	26	28	630	135	60	68	76	97	114	130	145	171	201
EL PASO TEXAS	1	57	28	82	613	215	105	119	134	158	181	219	278	298	327
CORPUS CHRISTI TEXAS	1	57	26	35	173	68	42	47	55	58	63	69	74	83	89
DENVER COL	1	54	26	52	215	119	65	83	95	102	114	126	132	142	186
	1	55	52	37	382	158	76	91	101	116	140	157	171	227	303
1D7	1	56	40	37	593	181	89	114	127	145	166	186	207	230	294
	1	57	25	15	264	134	83	94	109	116	127	136	154	171	219
	1	54 57	143	15	593	153	76	94	107	119	135	151	173	206	257
BOISE IDAHO	1	57	34	48	207	118	68	79	89	102	110	118	132	145	191
HELENA MONTANA	1	57	25	17	466	109	25	34	40	62	85	105	129	140	236
SALT LAKE CITY UTAH	2	53	2	99	207	153			105	105	105	105	105	236	236
	2	54	29	54	1070	196	69	83	94	102	117	134	181	303	419
	2	55	45	74	425	195	117	134	151	162	176	187	201	278	327
	2	56	29	80	395	163	95	105	114	123	136	145	165	201	327
	2	57	24	68	267	132	80	94	105	119	127	136	150	161	186
	2	53 57	129	54	1070	176	87	101	115	130	146	163	183	215	321
CHEYENNE WYO	1	57	27	22	130	56	29	32	47	51	55	58	63	71	76
ANCHORAGE ALASKA	1	53	10	54	1591	358	55	123	130	138	145	201	236	278	737
	1	54	48	38	3112	345	63	105	145	176	201	261	366	436	627
	1	55	34	22	703	237	44	71	89	105	145	257	327	385	655
	1	57	23	40	338	182	40	62	76	154	213	236	264	294	346
	1	53 57	115	22	3112	282	57	76	117	152	194	247	306	379	627
	2	55	5	106	184	142	114	114	123	123	145	145	186	186	201
	2	57	7	45	306	151	47	47	65	105	145	145	171	303	303
	2	55 57	12	45	306	147	47	65	114	123	134	145	171	201	303
		53	10	54	1591	358	55	123	130	138	145	201	236	278	737
		54	48	38	3112	345	63	105	145	176	201	261	366	436	627
		55	39	22	703	224	47	76	97	117	145	191	294	366	533
		57	30	40	338	175	47	60	76	145	165	224	264	298	327
		53 57	127	22	3112	269	57	76	112	145	183	236	289	366	513
PHOENIX ARIZ	1	57	26	119	488	246	134	150	166	201	227	257	278	327	419
LOS ANGELES CALIF	1	54	17	157	372	284	201	213	236	264	290	303	327	350	362
	2	54	3	109	162	134		123	123	123	145	145	145	145	171
	3	57	24	89	361	218	97	134	158	191	219	250	288	307	346
		54	20	109	372	262	145	171	213	236	264	290	315	339	362
		57	24	89	361	218	97	134	158	191	219	250	288	307	346
		54 57	44	89	372	238	114	152	179	215	243	271	300	322	356
SAN FRANCISCO CALIF	1	55	18	30	142	73	32	40	47	55	65	80	89	97	130
	1	56	31	11	177	66	21	34	45	51	65	73	81	89	114
	1	55 56	49	11	177	69	29	37	47	54	65	74	83	93	123
	2	57	31	42	211	79	44	48	52	58	69	79	89	105	145
		55 57	80	11	211	73	33	44	50	55	65	76	85	98	127

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
PASADENA CALIF	1	53	7	69	991	364	76	76	145	278	327	327	385	453	453
	1	54	27	41	598	215	89	105	152	171	189	201	227	264	385
	1	55	41	57	387	154	65	100	116	129	142	165	189	210	227
	1	56	46	42	574	195	94	123	145	158	175	194	213	257	327
	1	57	24	64	269	143	80	105	112	123	145	158	176	186	201
	1	53 57	145	41	991	187	83	108	129	146	166	184	203	229	315
BERKELEY CALIF	1	54	32	31	298	93	41	45	51	58	71	81	89	123	236
	1	55	49	36	247	95	47	59	67	76	83	89	105	132	162
	1	54 55	81	31	298	94	44	51	60	69	80	87	103	130	171
SAN JOSE CALIF	1	54	30	37	231	108	44	65	80	93	105	113	120	138	186
	1	55	50	25	299	119	47	73	82	89	102	123	152	171	201
	1	56	43	21	356	156	76	108	118	129	145	162	181	201	236
	1	57	25	27	221	118	34	93	105	110	118	123	145	162	201
	1	54 57	148	21	356	127	55	79	93	106	117	133	154	177	210
SAN LEANDRO CALIF	1	55	74	52	623	166	89	111	120	134	147	159	174	198	268
	1	56	41	34	286	137	55	97	112	127	145	157	168	184	201
	1	55 56	115	34	623	156	86	107	119	132	146	158	171	192	236
SAN DIEGO CALIF	1	57	26	32	241	100	52	60	76	80	87	97	105	145	162
BURBANK CALIF	1	57	26	41	433	180	89	100	123	145	165	183	195	236	311
SAN BERNARDINO CALIF	1	57	23	35	470	235	89	134	158	181	257	286	303	319	365
HONOLULU HAWAII	1	56	23	23	82	38	25	28	30	31	33	36	39	44	55
	1	57	28	30	87	45	31	33	35	36	38	40	47	55	76
	1	56 57	51	23	87	42	28	30	32	34	37	39	43	51	71
	2	56	11	20	37	28	21	25	26	26	28	28	29	32	34
		56	34	20	82	34	24	26	27	29	31	32	35	39	51
		57	28	30	87	45	31	33	35	36	38	40	47	55	76
		56 57	62	20	87	39	26	28	31	32	34	37	39	47	65
LAS VEGAS NEVADA	1	57	27	54	468	164	114	123	131	140	149	156	167	191	250
PORTLAND OREGON	1	53	17	35	349	150	55	65	89	105	123	158	186	257	278
	1	54	36	34	377	136	55	76	89	97	111	145	156	171	201
	1	55	67	26	210	105	57	69	81	92	101	110	121	140	175
	1	56	30	27	343	122	40	60	76	93	105	114	123	171	224
	1	57	26	32	315	98	38	42	60	68	76	105	117	134	145
	1	53 57	176	26	377	118	46	66	79	91	102	115	132	162	197
	2	54	30	65	428	176	89	97	105	132	145	171	194	236	327
	2	55	26	68	205	134	76	95	105	123	145	154	159	168	181
	2	56	13	58	384	145	60	69	72	76	123	134	145	236	278
	2	54 56	69	58	428	154	71	92	102	125	141	154	169	197	257
	3	53	1	249	249	249					278	278	278	278	278
	3	54	6	35	166	74	37	37	40	40	47	76	76	105	105
	3	53 54	7	35	249	99	37	37	40	47	76	76	105	171	171
	4	54	10	147	632	382	171	201	236	327	419	453	480	506	533
	5	54	10	188	418	267	177	183	189	195	201	303	327	356	365
	6	55	6	58	151	97	60	60	65	65	76	89	89	158	158
		53	18	35	349	156	55	83	89	105	123	171	201	250	278
		54	92	34	632	186	67	89	101	129	154	173	194	294	396
		55	99	26	210	112	61	73	86	97	106	119	137	156	177
		56	43	27	384	129	47	65	74	89	108	118	138	201	257
		57	26	32	315	98	38	42	60	68	76	105	117	134	145
		53 57	278	26	632	141	56	71	87	99	114	135	160	187	266
SEATTLE WASH	1	57	25	41	446	124	51	60	89	108	117	123	140	154	201

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS—STATE TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	54 57	163	11	454	143	61	82	97	110	127	143	173	197	243
MAINE TOTAL	57	18	46	265	121	47	80	85	97	114	130	145	154	171
MASSACHUSETS TOTAL	54 57	372	20	472	117	52	70	83	94	106	121	138	159	195
NEW HAMPSHRE TOTAL	57	17	4	152	70	44	47	52	58	65	68	73	97	105
RHODE ISLAND TOTAL	54 57	73	17	289	97	34	47	69	80	88	103	117	132	171
VERMONT TOTAL	57	26	24	83	52	34	36	40	44	49	55	65	72	76
DELAWARE TOTAL	57	28	77	481	188	94	110	119	138	162	186	236	264	311
NEW JERSEY TOTAL	54 57	422	26	971	144	66	81	96	111	126	141	163	5	40
NEW YORK TOTAL	53 57	378	38	642	175	72	94	115	138	160	183	211	243	305
PENNSYLVANIA TOTAL	53 57	1570	25	1011	206	85	113	138	159	182	207	233	273	343
DIS COLUMBIA TOTAL	53 57	154	41	459	140	76	95	106	120	131	142	159	180	210
KENTUCKY TOTAL	54 57	129	48	384	166	94	109	123	137	153	170	188	213	262
MARYLAND TOTAL	56 57	54	77	729	200	100	117	130	145	167	188	222	268	327
NO CAROLINA TOTAL	57	51	28	322	111	58	65	79	91	101	114	129	142	171
PUERTO RICO TOTAL	57	21	45	132	73	49	52	55	62	69	74	79	86	105
VIRGINIA TOTAL	57	51	50	232	106	65	76	89	96	105	112	119	130	150
WEST VIRGINA TOTAL	53 57	163	44	793	246	79	101	125	153	186	244	320	305	400
ALABAMA TOTAL	57	25	50	285	129	65	81	89	100	117	145	161	171	201
FLORIDA TOTAL	53 57	182	31	377	87	50	58	66	73	80	90	99	111	133
GEORGIA TOTAL	53 57	214	31	421	130	70	89	98	107	120	133	149	168	208
MISSISSIPPI TOTAL	57	24	15	198	76	21	49	53	60	65	76	86	105	145
SO CAROLINA TOTAL	57	53	46	285	109	59	76	83	90	97	103	129	142	171
TENNESSEE TOTAL	54 57	260	25	644	166	68	89	109	128	148	169	196	236	292
ILLINOIS TOTAL	54 57	476	14	865	221	77	105	141	170	199	234	268	313	388
INDIANA TOTAL	55 57	307	13	978	220	93	117	137	162	189	220	261	312	389
MICHIGAN TOTAL	53 57	240	23	743	173	56	84	101	115	136	158	189	234	340
OHIO TOTAL	53 57	607	17	656	157	72	90	108	123	139	157	179	211	270
WISCONSIN TOTAL	57	48	56	367	153	71	100	112	123	137	154	176	196	253
IOWA TOTAL	57	26	77	458	176	94	105	123	150	166	181	191	210	227
KANSAS TOTAL	55 57	83	30	470	146	58	72	89	101	123	141	175	213	288
MINNESOTA TOTAL	53 57	254	25	722	122	61	77	90	100	110	121	135	154	100
MISSOURI TOTAL	53 57	414	12	800	181	70	98	120	143	170	190	214	245	301
NEBRASKA TOTAL	57	52	65	248	127	81	92	101	109	119	130	141	166	191
NORTH DAKOTA TOTAL	57	24	51	220	109	55	69	74	94	105	117	132	141	171
SOUTH DAKOTA TOTAL	57	26	51	169	87	53	58	69	76	82	87	94	111	123
ARKANSAS TOTAL	57	26	34	170	83	42	47	60	63	76	86	97	123	134
LOUISIANA TOTAL	54 57	240	16	775	94	42	53	61	71	81	89	101	120	159
NEW MEXICO TOTAL	57	22	114	375	201	123	145	161	171	183	195	213	257	327
OKLAHOMA TOTAL	57	20	22	268	87	40	49	52	55	72	83	97	123	145
TEXAS TOTAL	53 57	575	10	2928	142	64	76	90	104	115	130	150	175	233
COLORADO TOTAL	54 57	143	15	593	153	76	94	107	119	135	151	173	206	257
IDAHO TOTAL	57	34	48	207	118	68	79	89	102	110	118	132	145	191
MONTANA TOTAL	57	25	17	466	109	25	34	40	62	85	105	129	140	236
UTAH TOTAL	53 57	129	54	107	176	87	101	115	130	146	163	183	215	321
WYOMING TOTAL	57	27	22	130	56	29	32	47	51	55	58	63	71	76
ALASKA TOTAL	53 57	127	9	3112	240	45	63	89	123	158	198	264	333	473
ARIZONA TOTAL	57	26	119	488	246	134	150	166	201	227	257	278	327	419
CALIFORNIA TOTAL	53 57	690	11	991	146	52	74	90	109	127	149	171	200	266
HAWAII TOTAL	56 57	62	20	87	39	26	28	31	32	34	37	39	47	65
NEVADA TOTAL	57	27	54	468	164	114	123	131	140	149	156	167	191	250
OREGON TOTAL	53 57	278	26	632	141	56	71	87	99	114	135	160	187	266
WASHINGTON TOTAL	57	25	41	446	124	51	60	89	108	117	123	140	154	201

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS—REGIONAL AND GRAND TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW ENGLND TOTAL	54 57	669	11	472	118	46	66	79	92	104	121	138	163	203
MID ATLNTC TOTAL	53 57	2398	25	1011	191	78	101	125	146	168	193	221	258	320
MID EAST TOTAL	53 57	623	28	793	170	72	92	106	121	137	155	180	221	317
SOUTH EAST TOTAL	53 57	758	15	644	129	57	72	85	97	110	127	148	173	226
MID WEST TOTAL	53 57	1705	13	978	189	74	97	117	137	159	186	221	268	344
GRT PLAINS TOTAL	53 57	879	12	800	152	65	83	99	114	131	151	179	200	262
GULF SOUTH TOTAL	53 57	883	10	2928	128	52	67	79	91	105	118	138	163	214
ROCKY MNTN TOTAL	53 57	358	15	1070	148	59	81	97	111	126	142	167	194	264
PAC COAST TOTAL	53 57	1235	9	3112	153	44	66	85	104	123	146	170	205	290
GRAND TOTAL	53 57	9508	9	3112	163	62	82	99	117	136	158	186	224	295

TABLE 1. SUSPENDED PARTICULATE MATTER—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
MIDDLESEX CNTY MASS	1	54	12	23	57	36	22	24	25	34	37	39	40	44	47
	1	55	52	14	112	48	24	32	37	41	44	48	54	61	70
	1	56	44	28	205	63	38	43	46	51	54	58	63	76	5
	1	54 56	108	14	205	53	28	36	40	43	47	52	58	63	84
LAKEHURST N J	1	55	40	19	120	54	29	33	40	47	51	54	63	70	76
	1	56	17	35	224	72	42	45	49	52	55	58	63	105	123
	1	55 56	57	19	224	59	31	37	44	49	52	55	63	71	97
KANAWHA CO W VA	1	54	26	33	261	106	45	51	62	71	89	105	117	145	219
	1	55	33	41	421	135	47	65	73	85	105	123	154	236	270
	1	56	7	21	309	127	21	21	47	65	89	89	123	278	278
	1	54 56	66	21	421	123	45	56	67	78	94	113	134	213	257
HILLSBOROUGH CO FLA	1	53	4	17	60	34		18	18	25	25	25	40	40	65
	1	54	37	3	90	29	8	11	20	22	25	29	34	40	58
	1	55	39	18	123	51	30	35	37	40	49	53	59	65	83
	1	56	25	18	75	40	25	26	28	32	37	40	50	55	65
	1	53 56	105	3	123	40	18	23	28	32	36	40	51	59	69
FULTON CO GEORGIA	1	53	2	45	64	54			47	47	47	47	47	65	65
	1	54	43	9	109	65	34	47	53	61	68	72	76	83	97
	1	55	27	21	116	56	28	32	42	47	51	54	60	89	100
	1	53 55	72	9	116	61	31	42	48	53	59	66	73	84	98
HAMILTON COUNTY OHIO	1	53	6	25	228	133	25	25	89	89	123	145	145	219	219
	1	54	55	15	176	63	25	32	41	48	56	63	76	89	123
	1	55	6	24	55	45	25	25	47	47	49	51	51	53	53
	1	53 55	67	15	228	68	24	32	42	49	55	63	78	95	130
TONKA BAY MINN	1	53	7	28	64	41	27	27	29	32	34	34	55	60	60
	1	54	37	12	267	59	17	22	34	40	52	60	73	86	100
	1	53 54	44	12	267	56	17	25	31	39	50	55	68	79	100
EDINA MINN	1	54	6	37	99	73	40	40	55	55	65	94	94	100	100
	1	55	24	50	748	142	55	61	65	89	105	129	145	171	236
	1	54 55	30	37	748	128	52	58	63	83	95	105	134	158	219
DENVER COUNTY COLO	1	54	21	15	113	54	25	32	41	44	47	55	65	76	97
	1	55	44	20	221	76	27	40	47	60	68	73	97	110	121
	1	56	31	21	382	104	44	55	72	80	89	105	119	138	162
	1	54 56	96	15	382	80	30	42	48	59	70	81	96	112	130
SALT LAKE CO UTAH	1	53	1	51	51	51					55	55	55	55	55
	1	54	27	22	240	68	31	34	38	50	60	67	74	89	123
	1	55	28	29	207	70	37	42	47	53	62	72	83	89	101
	1	53 55	56	22	240	69	34	37	45	51	59	69	76	89	114
MULTNOMAH CNTY ORE	1	54	15	28	140	92	47	65	89	93	101	105	112	116	123
	1	55	7	29	115	65	29	29	37	40	55	55	76	114	114
	1	54 55	22	28	140	83	29	40	65	83	93	101	108	115	120
GRAND TOTAL		53 56	723	3	748	69	26	35	42	49	55	63	75	94	119

TABLE 1. SUSPENDED PARTICULATE MATTER—NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER)											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
LITCHFIELD CNTY CONN	1	54	5	8	36	20	8	8	13	13	23	23	25	25	40
	1	55	38	9	187	43	24	28	31	35	38	43	48	52	60
	1	56	28	9	208	46	21	24	29	34	39	42	45	47	83
	1	54 56	71	8	208	43	21	24	29	33	38	41	45	51	63
ACADIA NATNL PARK ME	1	57	18	20	102	38	26	28	29	32	36	39	42	45	51
MT MANSFIELD FRST VT	1	57	7	15	62	32	15	15	21	25	32	32	34	47	47
WORCESTER COUNTY MD	1	57	24	37	94	60	40	49	52	56	59	62	68	73	89
CAPE HATTERAS NC	1	57	7	18	74	43	18	18	21	29	55	55	60	65	65
SHENANDOAH PARK VA	1	57	25	14	56	32	20	21	26	27	32	35	38	40	51
HOLLY RIVER PK W VA	1	57	25	13	76	34	18	20	26	27	28	34	42	47	60
GULF SHORES PARK ALA	1	57	13	15	71	35	15	21	27	29	34	37	40	47	55
FLORIDA KEYS FLORIDA	1	57	14	10	47	26	10	13	18	21	23	25	29	40	45
OATLAND ISLAND GA	1	57	16	22	130	46	29	32	36	38	42	45	47	52	55
JACKSON COUNTY MISS	1	57	20	16	223	43	18	25	26	28	29	34	42	47	65
FT DONELSON TENN	1	57	17	22	79	44	29	32	36	39	42	45	50	55	65
SANGAMON COUNTY ILL	1	57	16	34	122	66	37	40	56	58	61	64	65	89	105
HURON COUNTY MICH	1	57	34	5	132	42	11	18	24	32	36	40	47	62	83
PERRYS MEMORIAL OHIO	1	57	8	23	90	51	25	34	34	42	45	47	55	55	89
ELLIS COUNTY KANSAS	1	57	11	18	103	45	18	21	25	27	37	40	55	65	89
COOK COUNTY MINN	1	57	18	17	202	67	19	21	23	32	42	47	97	105	145
SHANNON COUNTY MO	1	57	18	13	75	35	21	24	25	28	31	34	44	47	60
THOMAS CO NEBR	1	57	12	12	96	33	12	13	15	17	18	21	23	55	97
WARD COUNTY N D	1	57	13	12	460	52	12	13	15	16	17	18	21	25	40
BLACK HILLS FRST S D	1	57	5	11	28	17	11	11	15	15	17	17	18	18	29
YELLOWSTONE PARK WYO	1	57	5	4	15	8	4	4	6	6	8	8	9	9	15
PT WORONZOF ALASKA	1	55	11	17	295	90	17	18	29	40	76	89	114	123	171
	1	56	46	5	133	26	9	11	13	15	17	22	24	29	51
	1	57	6	13	39	22	13	13	17	17	18	21	21	29	29
	1	55 57	63	5	295	37	9	12	15	17	20	24	28	47	89
GRAND CANYON ARIZ	1	57	26	3	61	16	5	6	8	10	13	17	18	21	29
WAIMANOLO HAWAII	1	57	23	23	85	41	25	28	30	33	36	37	39	47	80
GRAND TOTAL		54 57	511	3	460	40	13	18	23	27	33	38	45	54	72

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	54 56												
NUMBER OF SAMPLES		4	6	8	7	8	8	5	6	6	11	9	10
MAXIMUM		181	336	266	291	271	411	197	191	172	347	454	330
AVERAGE		140	215	158	193	158	188	144	132	142	145	209	179
MINIMUM		112	73	98	131	81	69	101	54	97	11	72	59
HARTFORD CONN	57												
NUMBER OF SAMPLES		2	2	3	2	2	1	3	2	2	2	3	2
MAXIMUM		192	279	314	113	118	124	149	87	130	84	136	216
AVERAGE		157	202	182	96	115	124	93	77	107	68	97	181
MINIMUM		122	125	91	80	112	124	38	67	85	52	35	147
NEW HAVEN CONN	57												
NUMBER OF SAMPLES		2	2	2	2	2	1	3	2	1	3	1	2
MAXIMUM		146	142	120	59	94	109	115	115	158	94	101	201
AVERAGE		121	116	89	57	77	109	72	107	158	72	101	181
MINIMUM		97	90	59	56	61	109	51	99	158	55	101	162
STAMFORD CONN	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	3	1	3	1	2	3
MAXIMUM		102	184	133	222	131	193	182	72	136	99	96	247
AVERAGE		88	179	76	127	81	135	133	72	109	99	68	147
MINIMUM		74	174	20	33	46	77	83	72	73	99	40	73
PORTLAND MAINE	57												
NUMBER OF SAMPLES			1	2	2	2	2	2		1	1	2	3
MAXIMUM			156	133	157	78	130	62		118	265	135	209
AVERAGE			156	117	123	62	115	54		118	265	128	151
MINIMUM			156	101	89	46	100	47		118	265	122	89
BOSTON MASS	54 57												
NUMBER OF SAMPLES		10	9	11	10	10	12	12	11	10	15	14	11
MAXIMUM		348	211	256	472	160	157	130	182	117	202	193	388
AVERAGE		214	181	153	165	126	105	88	104	97	141	141	185
MINIMUM		79	125	90	68	77	57	71	62	72	96	97	96
PITTSFIELD MASS	55 56												
NUMBER OF SAMPLES		1	2	2	2	2	4	2	2	3	4	2	2
MAXIMUM		50	81	81	58	83	92	59	44	103	103	69	100
AVERAGE		50	70	60	49	77	62	47	41	82	72	53	81
MINIMUM		50	60	40	40	72	47	36	39	72	36	38	63
EVERETT MASS	54 56												
NUMBER OF SAMPLES		8	10	9	7	9	9	9	9	8	12	9	9
MAXIMUM		254	212	222	138	353	175	255	178	160	293	186	259
AVERAGE		129	121	137	97	156	108	123	107	126	144	110	144
MINIMUM		61	63	86	39	87	51	58	66	90	33	42	53
LAWRENCE MASS	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	3	2	2	2
MAXIMUM		31	128	96	40	95	95	132	186	99	63	132	67
AVERAGE		26	83	61	40	75	92	83	127	82	54	93	61
MINIMUM		21	39	38	40	57	90	34	69	55	46	55	56
LYNN MASS	57												
NUMBER OF SAMPLES			1	1	2	3	2	2	1	2	3	2	2
MAXIMUM			83	83	165	85	160	195	161	82	253	70	108
AVERAGE			83	83	112	71	142	160	161	62	157	56	95
MINIMUM			83	83	59	54	124	126	161	43	103	43	82
SOMERVILLE MASS	57												
NUMBER OF SAMPLES		2	2	3	2	1	2	3	2	3	2	2	2
MAXIMUM		82	95	115	191	159	116	99	169	107	54	77	70
AVERAGE		62	78	86	163	159	90	65	135	95	53	59	53
MINIMUM		42	62	57	135	159	64	42	101	71	52	41	37
WORCESTER MASS	57												
NUMBER OF SAMPLES		3	2	3	1	2	3	3	2	3	2	1	3
MAXIMUM		160	219	148	148	131	116	135	102	85	115	169	99
AVERAGE		145	190	113	148	101	111	86	69	56	74	169	85
MINIMUM		133	162	65	148	72	106	54	37	42	34	169	64
MANCHESTER N H	57												
NUMBER OF SAMPLES			1	2	2	2	1	1	2	1	2	1	2
MAXIMUM			41	100	108	72	71	53	74	69	152	55	99
AVERAGE			41	81	75	62	71	53	65	69	96	55	78
MINIMUM			41	62	42	52	71	53	57	69	40	55	57
PROVIDENCE R I	54 57												
NUMBER OF SAMPLES		10	14	5	1	1	3	2	3	1	6	11	16
MAXIMUM		289	234	253	84	126	182	137	97	77	140	121	208
AVERAGE		114	92	125	84	126	138	105	89	77	111	67	89
MINIMUM		30	25	19	84	126	92	73	78	77	98	17	19
BURLINGTON VT	57												
NUMBER OF SAMPLES		2	3	1	2	2	3	2	2	2	2	3	2
MAXIMUM		43	79	83	74	73	73	46	67	57	55	36	81
AVERAGE		35	68	83	62	57	57	39	60	48	46	31	60
MINIMUM		28	52	83	51	42	42	32	53	39	37	24	39
WILMINGTON DEL	57												
NUMBER OF SAMPLES		2	2	2	2	3	3	2	3	1	2	5	1
MAXIMUM		301	260	356	136	327	246	181	181	122	121	306	481
AVERAGE		208	168	298	116	213	184	135	154	122	113	186	481
MINIMUM		115	77	240	97	100	141	89	125	122	105	108	481

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	4	4	8	2	2	4	4	4	1	2	4
MAXIMUM		106	89	137	181	136	105	140	99	213	86	250	217
AVERAGE		71	65	98	99	112	101	102	91	139	86	183	117
MINIMUM		52	37	71	51	88	97	71	78	105	86	116	55
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		4	4	4	8	7	3	4	3	4	4	3	4
MAXIMUM		224	187	236	142	138	110	104	129	168	138	133	146
AVERAGE		139	134	157	107	106	81	87	98	104	77	123	105
MINIMUM		73	86	122	53	82	64	69	56	77	38	112	51
CAMDEN N J	55 57												
NUMBER OF SAMPLES		6	6	6	9	9	4	5	6	6	4	7	6
MAXIMUM		272	368	352	288	318	265	224	216	235	165	376	345
AVERAGE		219	176	233	171	244	174	157	148	128	135	190	233
MINIMUM		179	54	130	73	163	61	118	101	75	80	108	150
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		5	3	4	7	6	4	4	3	3	2	3	4
MAXIMUM		165	177	156	217	217	143	94	83	71	102	172	170
AVERAGE		88	113	111	113	119	94	84	69	61	85	110	125
MINIMUM		33	71	47	64	77	42	79	62	49	69	66	83
TRENTON N J	55 56												
NUMBER OF SAMPLES		4	4	3	5	6	3	2	2		3	3	4
MAXIMUM		115	730	128	266	124	81	107	89		971	190	256
AVERAGE		89	306	116	134	94	70	97	86		376	156	165
MINIMUM		39	72	109	83	70	55	87	83		56	105	120
JERSEY CITY N J	54 57												
NUMBER OF SAMPLES		5	6	6	10	10	6	7	6	5	7	8	5
MAXIMUM		343	212	281	313	314	262	278	210	193	180	329	311
AVERAGE		195	169	178	182	186	160	167	147	129	119	224	205
MINIMUM		95	125	110	80	131	100	122	94	71	96	163	123
EAST ORANGE N J	57												
NUMBER OF SAMPLES		2	2	3	1	2	1	2	2	2		1	2
MAXIMUM		54	266	30	166	196	153	159	145	366		35	171
AVERAGE		51	172	28	166	131	153	97	138	259		35	142
MINIMUM		49	79	26	166	67	153	36	131	153		35	113
NEWARK N J	57												
NUMBER OF SAMPLES		2	2	2	3	1	2	1	1	2	2		
MAXIMUM		169	126	340	338	93	180	95	113	77	83		
AVERAGE		163	121	225	212	93	135	95	113	66	74		
MINIMUM		157	116	110	108	93	91	95	113	55	65		
NEW YORK N Y	53 57												
NUMBER OF SAMPLES		17	20	29	22	20	24	23	21	24	20	20	19
MAXIMUM		346	379	323	302	372	328	291	259	370	466	642	333
AVERAGE		197	189	172	197	225	190	187	171	215	243	208	203
MINIMUM		84	71	57	70	94	44	75	93	81	97	79	78
BINGHAMTON N Y	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	2	3	2	2
MAXIMUM		126	142	224	140	113	79	69	120	66	86	90	115
AVERAGE		91	118	147	140	90	72	62	106	60	71	81	107
MINIMUM		56	94	98	140	71	65	56	92	54	54	73	99
BUFFALO N Y	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	1	2	1	1	1
MAXIMUM		95	148	388	292	607	568	388	140	155	258	130	117
AVERAGE		85	109	306	230	343	318	293	140	148	258	130	117
MINIMUM		75	70	224	168	80	190	198	140	141	258	130	117
SCHENECTADY N Y	57												
NUMBER OF SAMPLES		1	2	3	2	2	1	2	2	2	2	2	1
MAXIMUM		68	93	94	82	126	82	72	110	60	143	103	49
AVERAGE		68	79	76	66	108	82	64	76	49	116	77	49
MINIMUM		68	65	55	50	91	82	57	43	38	90	51	49
SYRACUSE N Y	57												
NUMBER OF SAMPLES		2	3	2	1	3	1	3	2	2	2	3	2
MAXIMUM		70	198	253	107	153	128	197	109	133	136	347	146
AVERAGE		55	108	179	107	118	128	119	101	110	88	181	107
MINIMUM		40	44	105	107	65	128	64	93	87	40	86	69
UTICA N Y	57												
NUMBER OF SAMPLES		2	2	2	2	2	1	3	1	3	2	2	2
MAXIMUM		121	228	192	175	69	129	162	174	173	127	154	210
AVERAGE		93	163	160	146	63	129	91	174	114	116	106	138
MINIMUM		66	98	129	118	58	129	44	174	72	105	58	66
PHILADELPHIA PA	53 57												
NUMBER OF SAMPLES		76	94	103	97	108	102	103	85	103	92	123	112
MAXIMUM		910	742	684	1011	774	396	385	444	463	483	710	761
AVERAGE		262	236	230	262	250	193	184	188	191	203	237	285
MINIMUM		50	66	66	56	37	44	51	51	59	29	71	63
ALTOONA PA	55 56												
NUMBER OF SAMPLES			1	1	2	3	3		3	3	5	3	3
MAXIMUM			134	120	89	181	128		132	127	411	166	125
AVERAGE			134	120	87	142	92		97	88	196	139	100
MINIMUM			134	120	86	115	61		78	67	82	87	82

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
BRISTOL PA	55 56												
NUMBER OF SAMPLES			3	3	5	6	4	4	3	4	4	3	4
MAXIMUM			177	124	138	148	118	186	109	111	105	136	229
AVERAGE			126	96	85	106	79	122	87	88	60	111	139
MINIMUM			91	82	52	65	46	87	71	62	27	83	75
CHESTER PA	55 56												
NUMBER OF SAMPLES			4	1	6	7	3	4	4	4	5	2	4
MAXIMUM			222	94	168	323	155	198	179	180	126	273	179
AVERAGE			174	94	102	132	143	150	140	137	84	246	141
MINIMUM			121	94	38	47	131	101	87	93	40	220	100
ERIE PA	55 56												
NUMBER OF SAMPLES		4	5	3	4	4	4	4	4	4	5	4	5
MAXIMUM		82	88	89	82	64	100	66	85	91	110	77	550
AVERAGE		79	65	73	59	53	69	45	57	71	90	57	231
MINIMUM		73	41	55	44	45	25	33	42	39	39	33	31
PITTSBURGH PA	55 57												
NUMBER OF SAMPLES		4	6	5	6	6	7	19	16	6	7	6	6
MAXIMUM		99	253	253	311	348	449	180	276	232	534	309	191
AVERAGE		83	123	194	176	196	241	92	159	160	176	167	117
MINIMUM		67	43	120	103	120	103	58	92	98	69	79	78
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	4	3	4	4	4	5	4	5	7	3
MAXIMUM			515	289	264	314	310	229	191	211	418	258	268
AVERAGE			364	222	223	200	205	140	164	175	254	197	201
MINIMUM			284	153	193	145	135	74	121	158	116	85	131
ALLENTOWN PA	57												
NUMBER OF SAMPLES				1	1	3	2	2	3	1	3	1	3
MAXIMUM				110	87	152	145	98	214	58	195	87	129
AVERAGE				110	87	114	133	69	157	58	116	87	107
MINIMUM				110	87	73	122	41	107	58	48	87	71
JOHNSTOWN PA	57												
NUMBER OF SAMPLES					1	1	3	1	2	1	1	1	
MAXIMUM					244	132	126	124	268	239	223	103	
AVERAGE					244	132	88	124	248	239	223	103	
MINIMUM					244	132	33	124	228	239	223	103	
LANCASTER PA	57												
NUMBER OF SAMPLES					1	1	2	2	2	2	1		
MAXIMUM					199	127	170	98	91	73	126		
AVERAGE					199	127	152	92	85	69	126		
MINIMUM					199	127	135	87	80	65	126		
SCRANTON PA	57												
NUMBER OF SAMPLES		2	2	3	2	2	2	2	2	2	3	2	2
MAXIMUM		74	271	178	90	287	129	105	179	127	466	315	271
AVERAGE		70	239	121	84	198	123	83	134	126	349	293	238
MINIMUM		67	208	92	79	109	118	62	89	126	132	271	205
WASHINGTON DC	53 57												
NUMBER OF SAMPLES		9	13	14	14	14	15	11	16	12	15	11	10
MAXIMUM		218	321	224	459	215	186	188	258	163	254	274	236
AVERAGE		130	203	138	159	142	118	129	108	122	143	160	133
MINIMUM		74	110	68	82	63	44	57	52	86	41	58	78
LOUISVILLE KY	54 57												
NUMBER OF SAMPLES		8	8	5	10	7	8	17	19	18	9	7	13
MAXIMUM		166	188	231	275	318	288	272	358	335	306	353	384
AVERAGE		136	143	143	155	154	142	170	154	173	213	218	176
MINIMUM		97	113	48	95	78	91	101	65	59	96	129	92
BALTIMORE MD	56 57												
NUMBER OF SAMPLES		2	2	2	3	2	7	5	8	6	5	7	5
MAXIMUM		254	166	176	301	233	295	191	447	220	461	423	729
AVERAGE		185	146	150	207	161	164	136	177	146	209	270	372
MINIMUM		116	126	125	106	90	103	102	77	105	96	125	175
CHARLOTTE NC	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	2	2	1	2	3
MAXIMUM		171	161	141	131	113	84	90	132	174	141	129	322
AVERAGE		163	124	127	124	86	68	78	113	119	141	117	231
MINIMUM		155	88	113	117	59	45	67	95	65	141	105	132
WINSTON SALEM NC	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	3	1	3	2	2
MAXIMUM		189	228	162	106	109	86	99	119	37	87	140	128
AVERAGE		143	142	129	88	85	75	95	81	37	74	99	116
MINIMUM		98	56	96	71	62	64	91	28	37	61	59	105
SAN JUAN PUERTO RICO	57												
NUMBER OF SAMPLES		3	1	2	1		2	2	2	2	3	2	1
MAXIMUM		76	132	101	87		84	53	61	68	124	75	53
AVERAGE		62	132	93	87		82	49	56	67	81	64	53
MINIMUM		54	132	85	87		81	45	52	67	54	58	53
NORFOLK VA	57												
NUMBER OF SAMPLES		2	2	3	1	2	2	3	2	2	1	3	2
MAXIMUM		135	160	115	107	168	123	115	109	147	91	121	142
AVERAGE		128	127	107	107	150	114	101	94	120	91	86	111
MINIMUM		121	95	99	107	133	106	79	80	94	91	69	81

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
RICHMOND VA	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	3	1	3
MAXIMUM		99	232	157	101	106	81	115	95	137	119	50	165
AVERAGE		99	182	108	97	86	65	92	80	104	94	50	122
MINIMUM		99	133	60	91	66	50	69	66	72	71	50	64
CHARLESTON W VA	53 57												
NUMBER OF SAMPLES		6	8	6	10	13	10	12	11	13	12	9	13
MAXIMUM		502	696	793	561	422	493	475	386	546	655	497	764
AVERAGE		257	365	312	240	255	320	194	188	290	251	192	303
MINIMUM		66	77	81	62	91	63	63	75	60	44	58	67
WHEELING W VA	56 57												
NUMBER OF SAMPLES		2	2	2	3	1	2	6	4	4	5	3	2
MAXIMUM		344	277	215	217	157	178	197	212	163	419	278	292
AVERAGE		248	242	187	174	157	176	137	165	139	297	218	231
MINIMUM		152	207	159	137	157	175	96	126	101	208	165	170
BIRMINGHAM ALA	57												
NUMBER OF SAMPLES		2	3	1	2	3	2	2	1	2	3	2	2
MAXIMUM		171	195	78	177	243	88	166	166	197	285	118	154
AVERAGE		165	130	78	113	124	72	131	166	139	170	116	126
MINIMUM		159	87	78	50	54	56	97	166	82	101	115	99
TAMPA FLA	53 57												
NUMBER OF SAMPLES		14	13	14	13	12	11	14	14	13	13	11	15
MAXIMUM		123	158	171	151	132	141	108	115	110	100	172	377
AVERAGE		85	109	103	87	95	86	70	67	71	74	118	122
MINIMUM		39	78	48	33	44	40	50	34	54	31	50	57
MIAMI FLA	57												
NUMBER OF SAMPLES		2	2	1	2	3	1	3	2	2	2	3	2
MAXIMUM		86	65	99	65	64	69	106	56	59	64	89	58
AVERAGE		82	62	99	57	50	69	79	43	53	56	70	51
MINIMUM		79	59	99	49	39	69	51	31	47	49	53	45
ATLANTA GA	53 57												
NUMBER OF SAMPLES		17	22	21	17	14	14	19	18	11	12	7	15
MAXIMUM		306	256	319	159	203	181	216	197	212	421	242	261
AVERAGE		163	146	143	111	116	119	109	122	127	175	153	145
MINIMUM		53	31	33	50	56	83	55	85	64	85	78	82
COLUMBUS GA	57												
NUMBER OF SAMPLES		3	2	3	1	3	2	2	2	2	3	2	2
MAXIMUM		90	128	145	138	132	53	125	120	104	209	101	158
AVERAGE		75	118	106	138	83	45	107	116	83	159	88	114
MINIMUM		60	108	68	138	44	37	90	112	63	82	76	70
JACKSON MISS	57												
NUMBER OF SAMPLES		2	2	2	2	2	1	3	3	1	3	2	1
MAXIMUM		84	33	198	55	66	42	147	128	64	79	65	59
AVERAGE		70	26	156	54	60	42	103	110	64	70	40	59
MINIMUM		56	19	114	54	54	42	74	90	64	54	15	59
COLUMBIA SC	57												
NUMBER OF SAMPLES		2	2	2	1	2	3	2	3	1	2	3	1
MAXIMUM		133	99	209	79	93	104	104	135	78	175	156	139
AVERAGE		105	97	180	79	90	74	97	122	78	128	132	139
MINIMUM		77	96	152	79	87	55	90	100	78	82	98	139
GREENVILLE SC	57												
NUMBER OF SAMPLES		2	2	2	2	4	3	3	2	3	2	2	2
MAXIMUM		116	187	95	159	100	98	91	142	285	152	177	126
AVERAGE		99	140	75	118	83	73	70	103	169	112	166	103
MINIMUM		82	93	55	78	61	59	46	64	77	72	156	80
CHATTANOOGA TENN	54 57												
NUMBER OF SAMPLES		23	16	20	17	9	7	15	15	17	9	21	37
MAXIMUM		302	565	398	323	325	258	267	385	394	394	644	535
AVERAGE		146	211	186	195	213	152	145	167	190	235	193	138
MINIMUM		35	61	64	54	71	83	33	57	69	96	69	25
KNOXVILLE TENN	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	2	2	3	1	2	3
MAXIMUM		131	232	168	224	124	87	111	159	143	139	159	245
AVERAGE		122	171	129	160	124	76	94	130	121	139	157	198
MINIMUM		114	111	91	79	124	68	78	102	109	139	156	108
NASHVILLE TENN	57												
NUMBER OF SAMPLES		4	2	2	2	3	2	2	2	3	2	2	2
MAXIMUM		178	93	129	198	123	159	163	255	176	317	116	128
AVERAGE		153	85	116	156	96	124	123	209	131	221	103	116
MINIMUM		144	77	103	114	80	90	84	164	71	125	91	105
CHICAGO ILL	54 57												
NUMBER OF SAMPLES		25	33	23	17	24	36	30	37	35	29	36	30
MAXIMUM		386	626	519	503	570	385	443	398	362	584	563	865
AVERAGE		217	308	224	253	224	205	156	166	159	278	248	392
MINIMUM		35	43	68	78	72	68	42	14	15	59	66	30
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		8	8	8	8	9	6	8	15	8	8	7	8
MAXIMUM		553	407	608	441	242	297	337	313	357	302	338	328
AVERAGE		251	200	260	289	176	189	207	164	189	151	208	186
MINIMUM		128	72	102	119	68	120	107	89	82	32	97	84

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SPRINGFIELD ILL	57												
NUMBER OF SAMPLES				2	3	2	1	3	1	2	2	1	3
MAXIMUM				126	82	87	62	116	118	100	173	210	126
AVERAGE				102	69	77	62	98	118	97	107	210	77
MINIMUM				78	60	67	62	86	118	95	48	210	45
EAST CHICAGO IND	55 57												
NUMBER OF SAMPLES		7	14	28	22	27	14	23	14	19	25	20	15
MAXIMUM		470	290	978	720	852	427	298	479	482	489	439	700
AVERAGE		295	172	291	325	286	211	185	263	248	286	199	216
MINIMUM		104	55	105	66	79	118	82	168	110	74	73	62
EVANSVILLE IND	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	2	2	1	3
MAXIMUM		143	107	133	141	170	68	78	105	127	105	13	124
AVERAGE		141	100	106	141	110	66	75	90	100	97	13	98
MINIMUM		139	93	90	141	75	65	73	76	74	90	13	59
FORT WAYNE IND	57												
NUMBER OF SAMPLES		2	3	2	2	2	2	3	1	2	4	3	2
MAXIMUM		127	304	206	135	105	91	114	136	138	244	189	162
AVERAGE		108	212	172	126	95	85	95	136	105	184	146	135
MINIMUM		89	132	138	117	85	79	70	136	72	110	121	109
INDIANAPOLIS IND	57												
NUMBER OF SAMPLES		1	2	1	2	3	2	2	3	2	4	2	2
MAXIMUM		176	127	217	166	200	140	123	260	178	158	151	155
AVERAGE		176	123	217	144	162	134	111	212	132	140	128	133
MINIMUM		176	119	217	123	141	128	100	177	87	125	106	111
DETROIT MICH	53 57												
NUMBER OF SAMPLES		1	7	12	15	14	13	6	9	11	6	40	4
MAXIMUM		106	374	447	584	298	743	375	224	227	344	716	221
AVERAGE		106	252	179	192	149	223	158	117	154	209	305	170
MINIMUM		106	95	47	23	24	48	48	50	86	92	38	146
GRAND RAPIDS MICH	57												
NUMBER OF SAMPLES		2	2	2	2	2	3		3	1	1		
MAXIMUM		101	164	205	108	252	355		135	229	288		
AVERAGE		93	143	146	97	173	203		114	229	288		
MINIMUM		86	123	87	87	95	105		101	229	288		
KALAMAZOO MICH	57												
NUMBER OF SAMPLES		2	3	1	3	2	2	2	2	2	1	3	2
MAXIMUM		92	156	49	93	181	53	62	91	127	41	64	168
AVERAGE		77	110	49	81	132	47	53	64	123	41	53	132
MINIMUM		62	72	49	70	84	41	45	37	120	41	44	96
LANSING MICH	57												
NUMBER OF SAMPLES		2	2	1	4	3	2	2	3	1	2	2	2
MAXIMUM		86	113	140	121	152	121	152	112	51	57	76	101
AVERAGE		77	83	140	108	97	110	115	93	51	55	71	81
MINIMUM		69	53	140	77	34	99	79	81	51	53	67	61
FLINT MICH	57												
NUMBER OF SAMPLES		2	3	1	3	1	2	3	2	2	3	2	2
MAXIMUM		134	235	98	171	190	137	175	155	139	209	170	102
AVERAGE		110	173	98	132	190	126	127	138	132	130	153	95
MINIMUM		87	112	98	107	190	115	87	122	126	70	137	88
CINCINNATI OHIO	53 57												
NUMBER OF SAMPLES		25	39	88	35	30	28	27	24	34	24	33	41
MAXIMUM		301	289	656	396	297	334	220	286	507	418	444	326
AVERAGE		134	142	168	146	140	148	122	137	155	125	178	150
MINIMUM		26	50	39	17	58	56	36	58	60	25	32	32
YOUNGSTOWN OHIO	56 57												
NUMBER OF SAMPLES		2	2	2	3	2	1	7	8	8	2	5	4
MAXIMUM		139	249	190	263	231	63	198	424	651	359	406	164
AVERAGE		107	229	145	170	187	63	126	244	306	291	220	119
MINIMUM		76	209	101	102	144	63	75	103	89	224	116	88
CANTON OHIO	57												
NUMBER OF SAMPLES		2	2	2	2	3	1	3	3	1	2	2	3
MAXIMUM		164	274	304	248	291	112	220	216	151	226	218	186
AVERAGE		152	219	294	182	245	112	141	183	151	163	163	142
MINIMUM		141	164	285	117	185	112	70	129	151	101	116	108
CLEVELAND OHIO	57												
NUMBER OF SAMPLES		2	3	2	1	3	2	2	2	2	2	3	2
MAXIMUM		194	314	141	147	161	125	214	299	221	247	258	200
AVERAGE		161	249	117	147	140	123	194	296	154	182	224	185
MINIMUM		129	175	93	147	106	122	174	294	87	118	193	171
COLUMBUS OHIO	57												
NUMBER OF SAMPLES		2	2	3	2	2	2	2	2	3	4	3	2
MAXIMUM		211	241	222	132	132	175	180	248	189	274	318	136
AVERAGE		201	237	184	120	104	144	174	241	171	289	240	130
MINIMUM		191	234	145	108	77	114	169	234	159	176	164	125
TOLEDO OHIO	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	3	2	2	2
MAXIMUM		77	206	156	134	148	130	290	99	179	311	116	160
AVERAGE		71	176	118	94	101	123	174	86	141	202	92	118
MINIMUM		66	147	81	48	55	117	59	73	87	93	68	76

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LORAIN OHIO	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	2	2	3	2	2
MAXIMUM		145	247	124	127	182	159	279	215	78	398	136	343
AVERAGE		114	204	99	124	160	131	173	165	66	267	102	230
MINIMUM		84	162	75	122	138	114	68	116	55	105	69	117
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	3	2	2
MAXIMUM		160	367	217	347	142	64	183	119	159	225	116	249
AVERAGE		148	231	157	266	104	64	164	113	156	160	102	183
MINIMUM		137	95	97	177	67	64	145	107	153	122	88	117
RACINE WIS	57												
NUMBER OF SAMPLES		2	1	3	2	2	2	2	2	1	2	2	2
MAXIMUM		138	134	273	164	100	173	199	163	198	124	255	189
AVERAGE		99	134	213	155	78	118	133	138	198	123	182	134
MINIMUM		60	134	124	147	56	64	67	113	198	122	110	79
DES MOINES IOWA	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	2	2	2	2	2	3
MAXIMUM		204	458	153	177	401	196	233	198	129	164	117	220
AVERAGE		192	333	124	143	253	190	197	143	103	127	110	163
MINIMUM		180	208	96	109	165	185	162	89	77	90	103	115
KANSAS CITY KANSAS	55 57												
NUMBER OF SAMPLES			3	7	8	11	10	7	5	5	1		
MAXIMUM			378	242	470	299	292	219	276	314	146		
AVERAGE			213	146	232	174	145	137	152	144	146		
MINIMUM			82	58	89	48	30	65	50	76	146		
WICHITA KANSAS	57												
NUMBER OF SAMPLES		2	3	1	3	1	3	3	2	1	2	3	2
MAXIMUM		73	128	94	110	332	121	135	117	68	169	156	68
AVERAGE		66	97	94	83	332	98	123	114	68	113	93	64
MINIMUM		59	41	94	57	332	84	101	112	68	58	46	61
MINNEAPOLIS MINN	53 57												
NUMBER OF SAMPLES		13	15	15	14	15	17	14	34	38	18	17	15
MAXIMUM		269	221	722	206	472	135	143	277	249	292	183	282
AVERAGE		126	146	161	115	147	85	100	111	115	122	115	150
MINIMUM		71	93	60	46	59	42	60	44	41	64	45	56
DULUTH MINN	57												
NUMBER OF SAMPLES		1	2	3	1	3	2	2	2	2	3	2	2
MAXIMUM		123	141	401	56	139	123	166	217	166	197	87	231
AVERAGE		123	121	225	56	99	95	125	152	95	139	67	139
MINIMUM		123	101	129	56	73	67	84	87	25	79	47	48
KANSAS CITY MO	53 57												
NUMBER OF SAMPLES		14	11	19	19	20	16	16	18	13	19	14	9
MAXIMUM		490	541	393	528	271	209	248	504	298	418	875	389
AVERAGE		229	190	192	217	130	107	122	163	185	158	148	135
MINIMUM		48	56	41	69	36	41	45	57	76	12	50	27
ST LOUIS MO	55 57												
NUMBER OF SAMPLES		10	12	10	10	12	11	18	22	19	16	13	9
MAXIMUM		800	501	313	310	332	269	322	253	332	537	250	375
AVERAGE		287	318	222	219	186	171	187	180	217	226	165	278
MINIMUM		127	227	150	140	96	95	105	122	107	104	99	196
BRENTWOOD MO	55 56												
NUMBER OF SAMPLES		2		4	4	2		2	4	5	3	4	2
MAXIMUM		82		122	120	157		74	117	203	143	191	151
AVERAGE		81		103	90	150		70	87	125	117	103	122
MINIMUM		81		79	75	144		67	62	92	70	46	93
BRECKENRIDGE MO	55 56												
NUMBER OF SAMPLES		4	3	2	4	2			1	4	2	3	1
MAXIMUM		267	398	220	321	242			99	265	255	175	167
AVERAGE		157	238	208	212	232			99	147	168	100	167
MINIMUM		70	122	197	112	222			99	50	82	53	167
OMAHA NEB	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	2	3	2
MAXIMUM		114	138	194	178	86	110	135	148	106	189	143	171
AVERAGE		108	125	152	120	81	106	123	123	105	158	109	163
MINIMUM		103	113	110	89	77	102	112	99	105	127	92	156
LINCOLN NEB	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	3	1	3
MAXIMUM		105	185	128	248	140	132	128	122	170	85	112	223
AVERAGE		88	163	112	203	122	100	113	117	158	75	112	184
MINIMUM		72	141	96	175	104	68	98	113	146	65	112	188
BISMARCK ND	57												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	3	1	3	2	1
MAXIMUM		160	66	220	132	139	74	128	108	121	148	131	134
AVERAGE		108	58	219	121	109	72	113	93	121	89	112	134
MINIMUM		56	51	218	111	80	71	98	75	121	51	94	134
SIOUX FALLS SD	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	3	2	2
MAXIMUM		70	131	115	123	86	52	83	100	82	92	159	169
AVERAGE		69	107	101	100	70	52	67	93	81	72	108	129
MINIMUM		69	84	88	68	55	52	51	87	81	62	58	90

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LITTLE ROCK ARK	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	3	2	2	2	2
MAXIMUM		108	42	139	97	57	87	136	170	126	135	85	76
AVERAGE		76	38	99	79	51	75	120	114	94	109	76	57
MINIMUM		45	34	59	63	46	63	105	63	63	83	67	39
NEW ORLEANS LA	54 57												
NUMBER OF SAMPLES		19	17	19	19	19	19	19	13	21	15	18	18
MAXIMUM		159	204	249	214	775	135	109	103	164	239	137	167
AVERAGE		80	95	89	98	118	73	73	78	77	99	66	85
MINIMUM		34	44	39	46	36	32	39	39	26	47	16	26
BATON ROUGE LA	57												
NUMBER OF SAMPLES			3	2	2	2	2	2	3	1	3	2	2
MAXIMUM			163	280	162	153	151	218	192	181	316	292	265
AVERAGE			130	214	116	140	149	159	161	181	251	196	168
MINIMUM			112	148	70	128	148	100	130	181	138	100	72
ALBUQUERQUE NM	57												
NUMBER OF SAMPLES		2	2	3		2	2	2	1	2	2	2	2
MAXIMUM		258	281	208		123	184	218	168	265	199	341	375
AVERAGE		235	215	173		118	175	172	168	206	192	266	287
MINIMUM		212	149	145		114	167	126	168	148	186	192	199
TULSA OKLA	57												
NUMBER OF SAMPLES		3		2	1	2	1		3	1	2	3	2
MAXIMUM		53		268	80	74	53		148	80	138	113	76
AVERAGE		44		184	80	48	53		125	80	95	72	71
MINIMUM		40		101	80	22	53		100	80	53	52	67
FT WORTH TEXAS	53 56												
NUMBER OF SAMPLES		8	12	15	10	12	14	12	13	14	14	14	9
MAXIMUM		291	327	2928	1292	131	142	153	136	221	210	167	213
AVERAGE		155	167	318	323	85	99	94	98	125	116	136	134
MINIMUM		75	76	81	90	55	67	69	69	46	35	71	54
LAKEWORTH TEXAS	53 55												
NUMBER OF SAMPLES		4	5	5	6	7	8	8	7	5	3	5	5
MAXIMUM		87	513	443	608	375	268	207	226	348	166	188	183
AVERAGE		50	173	192	267	144	119	129	129	155	94	88	100
MINIMUM		32	55	46	125	54	44	90	83	56	44	62	10
HOUSTON TEXAS	53 57												
NUMBER OF SAMPLES		12	13	16	12	11	18	17	14	15	18	21	23
MAXIMUM		291	299	264	635	143	170	197	219	292	292	301	399
AVERAGE		123	143	149	163	113	91	93	128	165	147	125	178
MINIMUM		38	75	62	85	75	57	59	45	68	93	14	38
BELLAIRE TEXAS	53 56												
NUMBER OF SAMPLES		7	4	8	3	4	4	4	7	5	7	5	7
MAXIMUM		508	120	341	187	154	167	167	265	212	196	336	206
AVERAGE		218	91	184	144	127	129	107	139	134	122	188	144
MINIMUM		82	58	69	91	110	104	56	91	108	36	89	74
DALLAS TEXAS	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	2	2	3	1
MAXIMUM		92	95	243	127	164	152	196	117	116	45	135	182
AVERAGE		69	83	213	127	100	137	177	102	109	31	111	182
MINIMUM		46	71	161	127	38	123	158	87	102	18	76	182
SAN ANTONIO TEXAS	57												
NUMBER OF SAMPLES		2	3	1	3	2	2	2	2	2	3	2	2
MAXIMUM		67	181	247	204	135	174	128	110	105	120	116	630
AVERAGE		62	163	247	164	111	115	102	91	98	101	72	341
MINIMUM		57	154	247	125	88	56	76	72	92	68	28	52
EL PASO TEXAS	57												
NUMBER OF SAMPLES		3	2	2	2	2	2	4	2	3	2	2	2
MAXIMUM		369	266	302	325	613	153	229	107	198	312	348	305
AVERAGE		257	174	251	272	358	134	172	101	154	209	258	303
MINIMUM		155	82	200	219	104	116	127	95	108	106	168	301
CORPUS CHRISTI TEXAS	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	3	1	2	3
MAXIMUM		111	48	173	70	64	59	74	87	78	114	67	86
AVERAGE		92	41	126	57	53	47	73	72	64	114	55	64
MINIMUM		73	35	80	45	42	36	73	58	52	114	43	50
DENVER COL	54 57												
NUMBER OF SAMPLES		10	10	11	11	11	19	17	13	13	10	10	8
MAXIMUM		344	235	351	382	218	228	593	180	248	235	311	339
AVERAGE		179	110	206	162	115	129	159	128	144	175	150	221
MINIMUM		75	37	54	65	15	64	52	92	78	92	82	134
BOISE IDAHO	57												
NUMBER OF SAMPLES		7	4	4	2	3	2	2	3	2	2	2	1
MAXIMUM		181	102	188	93	94	83	178	120	127	121	207	79
AVERAGE		137	88	166	84	78	65	125	114	106	118	200	79
MINIMUM		108	74	144	75	52	48	72	105	85	116	193	79
HELENA MONTANA	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	2	3	1	3
MAXIMUM		205	39	25	78	134	109	197	126	466	85	143	86
AVERAGE		117	33	25	56	97	63	155	126	410	60	143	53
MINIMUM		30	28	25	35	57	17	113	126	355	38	143	17

TABLE 1. SUSPENDED PARTICULATE MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SALT LAKE CITY UTAH	53 57												
NUMBER OF SAMPLES		12	9	6	7	14	14	14	16	10	8	8	11
MAXIMUM		405	461	425	181	264	201	1070	192	291	210	332	411
AVERAGE		243	273	205	137	129	184	189	130	154	153	196	229
MINIMUM		68	125	86	98	74	54	93	67	58	95	78	99
CHEYENNE WYO	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	3	2	2	2	2	3
MAXIMUM		72	47	52	62	28	68	83	94	130	76	61	55
AVERAGE		60	39	42	44	28	56	72	80	95	64	42	46
MINIMUM		49	31	32	22	28	45	64	67	60	52	23	34
ANCHORAGE ALASKA	53 57												
NUMBER OF SAMPLES		8	11	9	14	11	12	9	7	12	8	14	12
MAXIMUM		242	210	196	3112	1155	853	466	330	684	1591	306	201
AVERAGE		118	97	88	589	430	387	235	222	257	442	164	98
MINIMUM		65	24	22	62	207	173	59	78	62	92	45	38
PHOENIX ARIZ	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	2	2	2	3	2	2
MAXIMUM		358	258	205	421	240	200	407	150	253	283	302	488
AVERAGE		327	214	176	322	178	159	282	135	239	213	284	483
MINIMUM		297	170	147	224	140	119	157	121	225	128	266	478
LOS ANGELES CALIF	54 57												
NUMBER OF SAMPLES		2	3	7	6	9	4	4	2	1	2	3	1
MAXIMUM		142	371	372	350	309	255	279	214	242	282	361	285
AVERAGE		136	320	272	241	204	212	233	212	242	279	258	285
MINIMUM		131	257	102	109	94	186	153	211	242	276	89	285
SAN FRANCISCO CALIF	55 57												
NUMBER OF SAMPLES		6	5	6	5	9	8	10	8	8	5	6	4
MAXIMUM		177	96	68	156	89	117	93	77	106	136	146	211
AVERAGE		104	60	56	105	53	85	56	53	51	91	102	108
MINIMUM		45	45	46	43	11	54	19	19	28	75	47	59
PASADENA CALIF	53 57												
NUMBER OF SAMPLES		9	13	17	18	19	12	12	10	9	11	8	7
MAXIMUM		442	401	574	240	356	228	252	220	366	598	269	991
AVERAGE		213	167	176	128	162	174	197	160	196	252	181	368
MINIMUM		65	84	58	42	64	119	130	41	123	79	69	83
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		4	6	5	8	7	15	4	7	9	7	5	4
MAXIMUM		118	271	172	247	131	101	136	143	166	190	298	254
AVERAGE		80	171	89	85	100	68	99	79	95	92	96	131
MINIMUM		44	86	42	36	60	44	78	50	60	31	38	43
SAN JOSE CALIF	54 57												
NUMBER OF SAMPLES		11	11	14	12	13	13	11	14	14	13	13	9
MAXIMUM		249	191	231	136	149	174	311	356	338	238	299	220
AVERAGE		142	120	106	83	100	105	129	175	164	147	124	120
MINIMUM		31	21	41	27	27	45	51	102	57	83	37	25
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		5	3	4	4	5	13	12	22	17	13	13	4
MAXIMUM		286	112	174	155	204	224	244	298	623	320	321	96
AVERAGE		122	85	118	103	142	147	156	167	201	154	176	73
MINIMUM		46	39	63	34	99	111	89	98	69	88	72	52
SAN DIEGO CALIF	57												
NUMBER OF SAMPLES		2	2	2	2	3	1	3	3	1	2	3	2
MAXIMUM		150	143	95	88	77	55	205	109	101	97	157	241
AVERAGE		108	100	72	60	64	55	127	92	101	86	133	176
MINIMUM		67	58	50	32	54	55	86	78	101	76	89	112
BURBANK CALIF	57												
NUMBER OF SAMPLES		2	2	3	2	2	2	2	3	1	2	4	1
MAXIMUM		297	185	176	179	97	120	148	316	165	184	433	391
AVERAGE		169	132	126	152	72	111	146	236	165	174	286	391
MINIMUM		41	79	91	126	48	103	144	185	165	165	163	391
SAN BERNARDINO CALIF	57												
NUMBER OF SAMPLES		1	2	2	2	2	3	5	1	1	1	2	1
MAXIMUM		35	317	108	182	183	336	306	289	470	336	453	180
AVERAGE		35	214	94	157	153	287	248	289	470	336	386	180
MINIMUM		35	112	81	133	124	260	161	289	470	336	320	180
HONOLULU HAWAII	56 57												
NUMBER OF SAMPLES		2	2	2	3	8	11	7	8	5	4	6	4
MAXIMUM		77	83	87	76	50	38	34	44	38	45	72	82
AVERAGE		55	68	72	51	35	31	30	33	33	38	51	47
MINIMUM		34	54	58	38	20	27	23	24	29	29	35	29
LAS VEGAS NEVADA	57												
NUMBER OF SAMPLES		1	2	2	4	2	3	2	2	3	2	2	2
MAXIMUM		163	237	184	468	139	163	157	147	160	122	246	242
AVERAGE		163	183	154	235	135	132	144	137	151	121	150	213
MINIMUM		163	129	125	128	132	117	131	128	135	120	54	185
PORTLAND OREGON	53 57												
NUMBER OF SAMPLES		18	14	31	13	11	12	17	50	28	37	26	21
MAXIMUM		200	199	343	243	384	205	222	186	210	483	632	250
AVERAGE		110	99	92	123	135	115	120	99	125	222	284	112
MINIMUM		34	27	33	26	32	56	41	46	44	50	38	35
SEATTLE WASH	57												
NUMBER OF SAMPLES		3	2	1	2	3	2	2	2	3	2	1	2
MAXIMUM		236	446	120	55	183	127	135	125	167	147	51	112
AVERAGE		165	253	120	50	144	94	126	102	117	131	51	76
MINIMUM		115	60	120	46	95	62	117	80	77	115	51	41

TABLE 1. SUSPENDED PARTICULATE MATTER—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	54 56												
NUMBER OF SAMPLES		8	9	9	8	9	9	9	9	8	13	11	6
MAXIMUM		118	77	104	47	112	75	81	80	91	205	60	58
AVERAGE		61	52	51	34	50	52	52	49	68	78	43	34
MINIMUM		23	14	25	21	36	33	38	28	48	33	23	23
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		10	10	4	8	5	3	4	2	4	1	3	3
MAXIMUM		48	70	64	63	51	49	68	51	51	30	65	76
AVERAGE		72	224	96	147	64	68	101	52	76	30	97	120
MINIMUM		27	19	51	31	26	24	38	50	30	30	49	43
KANAWHA CO W VA	54 56												
NUMBER OF SAMPLES		4	6	3	5	8	5	6	4	8	5	7	5
MAXIMUM		263	309	109	232	294	159	248	243	219	152	249	421
AVERAGE		101	176	82	123	143	87	127	156	118	81	82	178
MINIMUM		21	58	67	46	54	33	46	66	56	45	41	49
HILLSBOROUGH CO FLA	53 56												
NUMBER OF SAMPLES		11	8	11	11	8	3	9	10	9	8	7	1
MAXIMUM		52	123	85	98	57	35	47	66	49	50	69	92
AVERAGE		34	57	54	45	35	22	24	35	27	36	49	53
MINIMUM		21	20	25	22	9	3	5	7	11	18	25	17
FULTON CO GEORGIA	53 55												
NUMBER OF SAMPLES		5	8	10	10	6	5	8	7	3	4	2	4
MAXIMUM		72	109	98	116	107	82	79	97	81	87	80	75
AVERAGE		53	66	74	65	63	53	43	62	75	52	69	58
MINIMUM		41	35	28	28	33	31	9	27	66	31	59	45
HAMILTON COUNTY OHIO	53 55												
NUMBER OF SAMPLES		6	8	12	3	5	3	4	4	4	4	7	7
MAXIMUM		135	118	176	103	84	89	54	46	59	34	228	214
AVERAGE		59	63	87	71	57	61	37	33	48	25	96	106
MINIMUM		22	45	20	45	39	31	20	21	32	15	25	34
TONKA BAY MINN	53 54												
NUMBER OF SAMPLES		3	4	4	4	4	4	3		4	4	6	4
MAXIMUM		58	77	81	267	78	109	113		48	54	1 4	48
AVERAGE		51	50	74	118	59	43	65		24	29	65	35
MINIMUM		40	22	70	28	34	17	39		13	12	28	29
EDINA MINN	54 55												
NUMBER OF SAMPLES		3	3	5	4	4	5					1	5
MAXIMUM		136	94	208	189	272	748					99	93
AVERAGE		88	69	97	128	191	237					99	68
MINIMUM		50	53	57	64	135	72					99	37
DENVER COUNTY COLO	54 56												
NUMBER OF SAMPLES		8	7	10	8	8	10	8	7	8	8	6	8
MAXIMUM		170	106	145	199	172	169	382	117	108	120	116	106
AVERAGE		79	56	76	103	72	91	144	72	63	68	77	54
MINIMUM		28	28	20	46	22	21	43	34	22	41	45	15
SALT LAKE CO UTAH	53 55												
NUMBER OF SAMPLES		6	2	4	3	4	8	9	5	3	2	5	5
MAXIMUM		135	128	99	54	207	101	107	71	140	37	1 6	240
AVERAGE		79	98	73	47	84	67	60	52	83	33	71	77
MINIMUM		50	68	40	36	37	22	29	43	36	30	39	27
MULTNOMAH CNTY ORE	54 55												
NUMBER OF SAMPLES			1	1	1	2		3	2	2	6	4	
MAXIMUM			40	84	40	91		59	110	115	122	1[illegible]0	
AVERAGE			40	84	40	59		47	90	78	103	1[illegible]	
MINIMUM			40	84	40	28		29	71	41	83	99	

TABLE 1. SUSPENDED PARTICULATE MATTER—NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER)

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LITCHFIELD CNTY CONN	54 56												
NUMBER OF SAMPLES		5	7	8	9	8	9	8	5	2	4	1	5
MAXIMUM		54	187	56	85	208	88	66	60	27	36	33	34
AVERAGE		33	65	37	39	59	44	45	42	25	20	33	29
MINIMUM		9	19	18	9	20	26	32	28	24	8	33	22
ACADIA NATNL PARK ME	57												
NUMBER OF SAMPLES					2	2	1	3	2	2	1	3	2
MAXIMUM					35	44	102	50	28	37	33	52	41
AVERAGE					27	42	102	36	27	36	33	39	36
MINIMUM					20	41	102	28	26	35	33	28	31
WORCESTER COUNTY MD	57												
NUMBER OF SAMPLES								5	4	4	3	5	3
MAXIMUM								69	74	57	77	94	72
AVERAGE								58	63	49	62	70	58
MINIMUM								48	52	40	49	37	46
SHENANDOAH PARK VA	57												
NUMBER OF SAMPLES						3	4	3	3	3	3	4	2
MAXIMUM						53	38	56	42	38	30	41	37
AVERAGE						36	30	48	38	26	27	25	29
MINIMUM						28	21	39	35	21	25	14	22
HOLLY RIVER PK W VA	57												
NUMBER OF SAMPLES						2	3	4	4	4	3	3	2
MAXIMUM						39	76	50	56	28	40	29	19
AVERAGE						33	44	40	53	22	29	20	17
MINIMUM						28	28	27	47	15	19	13	16
FLORIDA KEYS FLORIDA	57												
NUMBER OF SAMPLES									1	4	3	3	3
MAXIMUM									25	47	39	29	46
AVERAGE									25	30	23	20	31
MINIMUM									25	13	11	10	20
OATLAND ISLAND GA	57												
NUMBER OF SAMPLES						2	2	2	2	1	3	2	2
MAXIMUM						41	43	56	53	22	130	32	36
AVERAGE						39	40	51	53	22	74	30	33
MINIMUM						37	37	46	53	22	44	29	30
JACKSON COUNTY MISS	57												
NUMBER OF SAMPLES									4	3	5	3	5
MAXIMUM									50	31	71	44	223
AVERAGE									41	25	43	31	64
MINIMUM									27	17	16	23	20
FT DONELSON TENN	57												
NUMBER OF SAMPLES					1	2	2	3	2	2	2	2	1
MAXIMUM					60	71	36	37	79	48	48	55	38
AVERAGE					60	59	32	30	57	44	40	49	38
MINIMUM					60	47	28	22	35	41	33	43	38
SANGAMON COUNTY ILL	57												
NUMBER OF SAMPLES				1	2	1	2	2	2	2	1	2	1
MAXIMUM				39	37	65	64	66	82	97	122	113	59
AVERAGE				39	35	65	62	65	69	81	122	78	59
MINIMUM				39	34	65	60	64	57	65	122	44	59
HURON COUNTY MICH	57												
NUMBER OF SAMPLES			2	1		2	4	4	4	4	5	4	4
MAXIMUM			24	75		60	80	72	44	132	111	79	33
AVERAGE			17	75		46	46	54	34	57	43	40	21
MINIMUM			10	75		32	31	27	24	16	5	15	12
ELLIS COUNTY KANSAS	57												
NUMBER OF SAMPLES						1	1	2	2	1	2		2
MAXIMUM						18	40	61	103	26	23		37
AVERAGE						18	40	58	95	26	21		32
MINIMUM						18	40	55	87	26	19		28
COOK COUNTY MINN	57												
NUMBER OF SAMPLES				2	1	3	2	1	3	2		2	2
MAXIMUM				42	42	139	82	202	157	118		34	19
AVERAGE				33	42	89	51	202	92	82		26	18
MINIMUM				25	42	34	21	202	23	47		19	17
SHANNON COUNTY MO	57												
NUMBER OF SAMPLES									1	4	4	4	5
MAXIMUM									41	57	75	32	41
AVERAGE									41	42	44	24	30
MINIMUM									41	21	23	13	25
PT WORONZOF ALASKA	55 57												
NUMBER OF SAMPLES		3	3	6	5	7	4	5	6	5	5	7	7
MAXIMUM		51	11	129	34	120	25	158	106	68	65	295	40
AVERAGE		48	9	35	18	43	15	58	32	28	31	79	24
MINIMUM		46	7	11	8	11	11	13	8	13	5	17	13
GRAND CANYON ARIZ	57												
NUMBER OF SAMPLES							2	3	3	4	5	4	5
MAXIMUM							39	38	61	27	16	15	20
AVERAGE							32	24	26	18	10	8	11
MINIMUM							26	17	8	13	6	5	3
WAIMANOLO HAWAII	57												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	2	1
MAXIMUM		30	37	40	40	35	26	34	31	47	66	84	85
AVERAGE		26	37	38	37	30	25	31	30	39	58	81	85
MINIMUM		23	37	36	35	26	25	28	29	32	51	79	85

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	54 55	32	62	418	177	85	98	128	137	145	175	207	244	288
BOSTON MASS	1	54 55	36	80	455	227	110	121	168	196	223	244	263	288	340
EVERETT MASS	1	54 55	38	51	680	176	90	109	119	134	151	165	186	216	266
PROVIDENCE R I	1	54 55	23	107	463	246	125	166	191	212	228	239	305	340	401
	2	54 55	23	59	367	144	64	76	83	90	106	125	162	226	288
		54 55	46	59	463	195	76	90	116	148	175	219	236	301	355
ATLANTIC CITY N J	1	54 55	17	64	334	225	99	106	148	244	259	266	281	301	314
HIGHTSTOWN N J	1	54 55	10	55	157	114	64	76	90	112	119	125	137	148	162
GLEN GARDNER N J	1	54 55	12	42	175	104	46	64	90	95	101	106	116	148	162
RED BANK N J	1	54 55	9	98	298	171	98	106	116	125	175	175	219	232	244
ELIZABETH N J	1	55	8	79	291	188	90	148	148	175	186	196	207	207	288
PAULSBORO N J	1	55	10	102	309	193	106	133	140	148	175	191	207	288	314
CAMDEN N J	1	55	8	133	391	237	137	148	148	207	219	232	244	244	371
PERTH AMBOY N J	1	55	11	28	375	150	28	95	101	106	125	137	148	244	288
TRENTON N J	1	55	6	100	201	143	106	106	133	133	140	148	148	175	175
JERSEY CITY N J	1	54 55	14	112	598	261	112	125	162	191	207	226	314	340	608
NEW YORK N Y	2	53	3	550	970	709		558	558	558	658	658	658	658	1081
	2	54	29	130	730	332	175	214	237	259	281	314	401	455	558
	2	55	22	91	514	247	106	162	180	191	202	244	273	401	449
	2	53 55	54	91	970	319	162	183	207	238	268	305	401	452	558
	3	53	2	90	266	156		90	90	90	125	125	125	125	288
	3	54	23	45	512	192	81	106	116	137	175	191	226	266	401
	3	55	22	21	333	136	39	76	95	106	119	137	157	191	244
	3	53 55	48	21	512	166	76	90	106	118	137	168	196	232	305
	4	54	1	375	375	375					401	401	401	401	401
	4	55	14	50	384	162	54	90	98	116	125	137	226	244	288
	4	54 55	15	50	384	176	64	90	106	116	137	148	244	266	371
		53	6	113	970	477	125	125	288	288	401	558	558	658	658
		54	53	45	730	271	106	140	180	212	239	266	323	401	501
		55	58	21	514	184	76	97	110	137	163	187	216	262	340
		53 55	117	21	970	239	88	112	138	172	200	237	275	349	455
PHILADELPHIA PA	1	53	8	136	690	400	137	148	148	371	401	473	558	558	658
	1	54	75	69	1340	289	139	159	180	212	232	255	303	371	530
	1	55	131	55	919	248	128	158	185	210	228	246	271	304	381
	1	53 55	214	55	1340	268	131	159	184	212	230	251	282	332	457
	2	54	6	379	1176	758	401	401	608	608	658	776	776	1081	1081
	2	55	18	230	765	442	232	288	314	360	401	449	558	658	717
	2	54 55	24	230	1176	521	232	314	355	401	449	558	658	705	776
	3	53	6	76	760	330	76	76	125	125	207	437	437	473	473
	3	54	26	24	750	202	76	98	116	125	166	191	207	244	340
	3	55	14	71	359	175	76	106	137	153	159	164	175	226	288
	3	53 55	46	24	760	211	76	102	121	148	165	188	214	266	425
	4	55	6	207	959	392	207	207	244	244	288	340	340	401	401
	5	55	7	73	121	98	76	76	81	85	90	90	112	119	119
		53	14	76	760	370	76	137	148	371	401	425	473	558	717
		54	107	24	1340	294	114	148	168	197	223	244	301	401	591
		55	176	55	959	261	118	151	179	209	229	251	280	330	432
		53 55	297	24	1340	278	116	149	173	207	228	253	292	367	511
BRISTOL PA	1	55	8	54	220	137	54	98	98	106	125	162	175	175	207
CHESTER PA	1	55	7	99	296	152	98	98	106	116	125	125	148	207	207
WASHINGTON DC	1	53	10	180	955	455	207	226	244	288	437	473	558	658	776
	1	54	34	65	456	218	110	125	142	175	218	233	257	275	381
	2	55	21	63	403	201	76	125	148	162	191	216	235	266	371
		53 55	65	63	955	249	112	133	160	191	221	238	266	352	444
LOUISVILLE KY	1	54 55	30	44	685	212	81	116	137	155	175	207	229	301	340
	2	54 55	15	61	579	194	81	85	106	137	175	186	207	244	401
	3	54	5	82	311	149	90	90	106	106	137	137	148	148	340
		54	40	44	685	207	81	90	125	143	168	194	222	305	381
		55	10	72	323	175	76	90	133	140	148	175	207	244	314
		54 55	50	44	685	200	80	90	128	142	164	191	219	298	360

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) $\times 10^{-1}$											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
CHARLESTON W VA	1	53 54	36	60	625	259	125	155	186	211	228	244	298	340	449
	4	54 55	23	123	567	257	125	148	162	175	219	244	314	401	473
		53 55	59	60	625	258	125	151	172	207	226	241	303	371	461
TAMPA FLA	1	53	5	103	239	146	106	106	116	116	125	125	175	175	244
	1	54	44	32	377	137	64	79	90	101	114	130	155	186	259
	1	55	21	25	312	177	54	106	148	162	186	207	226	244	288
	1	53 55	70	25	377	150	67	87	100	113	133	157	180	218	262
ATLANTA GA	1	53	2	197	275	236			207	207	207	207	207	288	288
	1	54	42	73	728	233	116	140	179	193	207	237	259	283	340
	1	55	43	73	475	217	90	129	144	175	207	232	266	305	371
	1	53 55	87	73	728	225	109	133	162	188	207	234	263	294	340
	2	54	8	28	272	148	28	64	64	106	148	175	207	207	266
		53	2	197	275	236			207	207	207	207	207	288	288
		54	50	28	728	219	106	131	162	185	201	229	256	276	323
		55	43	73	475	217	90	129	144	175	207	232	266	305	371
		53 55	95	28	728	219	101	130	156	183	203	231	261	285	340
CHATTANOOGA TENN	1	54 55	20	99	727	329	125	191	226	288	323	360	401	449	516
	2	54 55	42	46	509	187	69	80	106	131	152	167	226	288	401
	3	55	11	53	349	175	54	90	106	162	186	196	207	226	244
	4	55	13	113	543	248	125	175	191	207	244	259	273	288	340
		54	42	46	509	224	76	95	140	162	186	244	288	371	430
		55	44	48	727	231	76	116	153	175	201	226	266	314	473
		54 55	86	46	727	228	79	106	148	166	195	235	277	340	425
CHICAGO ILL	1	54	31	89	1071	368	125	196	226	259	314	355	401	494	558
	1	55	23	136	1156	390	162	244	288	305	331	355	386	473	658
	1	54 55	54	89	1156	377	157	207	244	293	319	348	393	487	658
	2	54	33	179	1409	523	207	288	340	386	473	558	608	658	916
	2	55	26	183	1090	462	288	309	340	381	437	494	537	598	638
	2	54 55	59	179	1409	496	244	301	340	392	452	509	576	631	747
	3	54	36	29	820	209	101	114	122	148	175	193	219	259	425
	4	54	7	48	518	311	54	54	244	266	288	288	401	516	516
	4	55	44	43	601	265	106	133	159	188	219	262	323	401	516
	4	54 55	51	43	601	271	106	133	164	194	244	275	340	419	516
		54	109	29	1409	356	113	164	197	233	279	340	419	516	658
		55	93	43	1156	351	131	175	226	278	318	358	417	494	602
		54 55	202	29	1409	354	119	168	204	253	300	350	418	511	625
EAST CHICAGO IND	1	55	8	86	725	386	90	125	125	340	401	473	516	516	558
	2	55	9	67	558	339	70	76	244	340	401	401	473	501	530
	3	55	5	35	207	139	39	39	125	125	175	175	191	191	207
	4	55	5	106	339	219	106	106	148	148	207	207	314	314	340
		55	27	35	725	294	76	106	148	196	301	327	401	490	524
DETROIT MICH	1	53 54	51	106	1045	502	262	305	352	413	482	530	608	709	811
CINCINNATI OHIO	1	53	16	199	1430	486	244	288	305	340	371	401	473	717	846
	1	54	88	29	806	267	125	159	182	213	241	264	286	350	459
	1	55	22	95	735	323	175	207	235	259	288	340	381	449	516
	1	53 55	126	29	1430	307	139	175	207	235	261	286	345	401	524
	2	53	4	53	847	324		54	54	175	175	175	244	244	916
	2	54	59	21	623	208	93	112	132	151	169	191	235	301	386
	2	55	5	174	366	251	175	175	207	207	244	244	340	340	401
	2	53 55	68	21	847	218	93	116	135	155	173	202	244	309	389
	3	53	3	168	980	455		175	175	175	244	244	244	244	1081
	3	54	70	35	720	196	79	97	117	141	162	191	228	270	340
	3	55	12	103	362	199	106	125	148	183	191	199	207	244	371
	3	53 55	85	35	980	206	84	102	128	148	170	199	229	270	371
	4	54	41	69	891	293	119	155	180	198	226	266	340	425	558
	4	55	10	70	367	189	76	137	148	162	175	207	219	232	244
	4	54 55	51	69	891	272	119	148	171	191	215	236	305	386	516
		53	25	53	1430	456	175	219	266	305	355	386	473	776	916
		54	256	21	891	238	97	124	150	172	202	233	270	326	437
		55	49	70	735	258	131	162	187	207	226	240	305	366	425
		53 55	332	21	1430	258	101	132	160	185	215	242	284	356	460
KANSAS CITY KANSAS	1	55	13	113	388	213	125	175	180	186	196	202	207	244	340
MINNEAPOLIS MINN	1	53	9	66	675	220	76	90	106	137	148	148	244	288	340
	1	54	48	50	376	148	70	82	95	114	129	148	186	218	244
	1	55	25	75	494	179	73	83	98	106	155	168	244	273	371
	1	53 55	82	50	675	166	71	81	98	114	134	158	199	240	283

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
KANSAS CITY MO	1	53 54	9	44	424	167	46	90	106	125	137	137	148	175	340
	2	54 55	30	80	458	191	101	129	140	153	170	186	202	259	314
	3	53 54	23	22	223	114	46	68	76	90	112	125	140	162	196
	4	55	11	16	109	56	17	24	33	39	54	70	76	90	106
		53 55	73	16	458	143	46	74	92	109	131	146	168	193	273
NEW ORLEANS LA	1	54	26	96	423	163	106	119	131	137	145	159	170	191	207
	1	55	18	41	357	196	59	90	133	148	207	244	266	277	340
	1	54 55	44	41	423	177	90	119	131	142	153	171	201	251	288
	2	54	29	48	541	130	51	57	70	85	98	106	137	162	288
	2	55	24	14	233	113	64	76	82	90	98	106	133	148	207
	2	54 55	53	14	541	122	52	66	78	87	98	111	134	157	226
	3	55	5	101	269	160	106	106	137	137	148	148	175	175	288
		54	55	48	541	146	57	81	99	114	132	143	160	175	273
		55	47	14	357	150	64	78	90	106	134	145	175	235	270
		54 55	102	14	541	148	59	79	95	111	131	144	163	202	272
FT WORTH TEXAS	1	53	3	133	392	224		137	137	137	148	148	148	148	401
	1	54	40	32	370	143	61	83	96	110	125	143	175	207	237
	1	55	30	16	292	136	59	72	90	125	142	159	175	194	226
	1	53 55	73	16	392	143	60	81	97	116	135	151	175	200	239
LAKEWORTH TEXAS	1	53	1	98	98	98					106	106	106	106	106
	1	54	32	34	366	112	44	51	66	72	83	112	133	175	199
	1	55	25	9	134	72	28	46	59	66	72	76	87	111	125
	1	53 55	58	9	366	94	41	51	62	69	75	88	114	130	175
HOUSTON TEXAS	1	53	11	53	1150	342	54	125	175	207	244	288	371	401	658
	1	54	56	6	619	177	70	83	101	125	158	179	196	266	323
	1	55	30	26	573	174	76	95	112	133	155	175	194	226	288
	1	53 55	97	6	1150	195	72	90	109	140	165	184	205	268	350
BELLAIRE TEXAS	1	53	2	62	317	189			64	64	64	64	64	340	340
	1	54	22	56	311	138	70	90	102	112	125	137	148	186	207
	1	55	17	44	218	114	64	68	76	106	125	130	139	148	162
	1	53 55	41	44	317	130	64	74	93	106	125	135	145	168	207
DENVER COL	1	54 55	49	65	440	170	83	103	125	139	159	179	196	219	259
SALT LAKE CITY UTAH	2	53	2	158	270	214			175	175	175	175	175	288	288
	2	54	29	70	932	261	90	125	142	162	181	194	244	371	608
	2	55	22	103	929	300	116	130	143	175	207	288	314	401	717
	2	53 55	53	70	932	275	101	130	143	162	189	244	298	360	658
ANCHORAGE ALASKA	1	53	10	182	670	388	207	305	323	340	371	401	437	473	558
	1	54	48	40	1000	253	114	131	152	171	189	207	244	288	473
	1	55	25	39	466	192	90	116	140	153	166	175	199	244	381
	1	53 55	83	39	1000	251	110	132	154	171	191	213	277	350	459
LOS ANGELES CALIF		54	20	181	1433	531	226	288	401	449	487	516	544	717	916
PASADENA CALIF	1	53	7	361	1730	861	371	371	401	473	658	658	916	1642	1642
	1	54	25	210	1429	575	314	352	389	437	516	558	633	717	1276
	1	55	23	150	1177	358	166	216	235	266	340	401	422	442	473
	1	53 55	55	150	1730	521	219	266	347	381	423	459	541	638	1179
BERKELEY CALIF	1	54 55	60	41	1030	242	76	112	130	143	163	199	244	340	473
SAN JOSE CALIF	1	54 55	50	32	849	185	64	83	110	128	145	160	175	219	340
SAN LEANDRO CALIF	1	55	11	94	206	149	106	116	125	133	148	162	175	186	196
PORTLAND OREGON	1	53	16	38	1020	401	54	125	244	340	381	425	449	658	717
	1	54	36	65	1132	336	116	140	168	196	229	273	340	455	776
	1	55	13	74	433	208	76	90	148	183	199	207	266	288	340
	1	53 55	65	38	1132	326	83	134	175	202	244	298	386	446	737
	2	54	30	82	966	329	98	140	191	216	244	288	360	437	776
	2	55	16	72	434	171	90	106	119	125	140	186	196	226	244
	2	54 55	46	72	966	274	95	119	140	184	207	238	288	381	473
	3	53	1	40	1040	1040					81	1081	1081	1081	1081
	3	54	6	10	146	66	10	10	17	17	28	76	76	137	137
	3	53 54	7	10	1040	205	10	10	17	28	76	76	137	148	148
	4	54	10	277	2356	1418	288	401	473	276	506	1937	2097	2223	2348
	5	54	10	253	1026	559	259	273	288	340	401	658	776	916	999
		53	17	38	1040	439	54	125	244	360	401	425	473	717	776
		54	92	10	2356	458	90	139	189	228	266	330	422	737	1057
		55	29	72	434	188	81	106	125	142	184	193	207	266	323
		53 55	138	10	2356	399	84	130	168	205	248	305	394	473	971

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER— URBAN STATIONS— TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1} MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT 10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	54 55	32	62	418	177	85	98	128	137	145	175	207	244	288
MASSACHUSETS TOTAL	54 55	77	51	680	196	90	109	123	153	171	202	231	264	323
RHODE ISLAND TOTAL	54 55	46	59	463	195	76	90	116	148	175	219	236	301	355
NEW JERSEY TOTAL	54 55	105	28	598	183		106	126	152	144	189	214	270	310
NEW YORK TOTAL	53 55	117	21	970	239	88	112	138	172	200	237	275	349	455
PENNSYLVANIA TOTAL	53 55	312	24	1340	272	111	142	169	200	224	247	285	357	501
DIS COLUMBIA TOTAL	53 55	65	63	955	249	112	133	160	191	221	238	266	352	444
KENTUCKY TOTAL	54 55	50	44	685	200	80	90	128	142	164	191	219	298	360
WEST VIRGINA TOTAL	53 55	63	60	2340	298	125	151	172	207	226	241	303	371	461
FLORIDA TOTAL	53 55	70	25	377	150	67	87	100	113	133	157	180	218	262
GEORGIA TOTAL	53 55	95	28	728	219	101	130	156	183	203	231	261	285	340
TENNESSEE TOTAL	54 55	86	46	727	228	79	106	148	166	195	235	277	340	425
ILLINOIS TOTAL	54 55	202	29	1409	354	119	168	204	253	300	350	418	511	625
INDIANA TOTAL	55	27	35	725	294	76	106	148	196	301	327	401	490	524
MICHIGAN TOTAL	53 54	58	47	1045	502	262	305	352	413	482	530	608	709	811
OHIO TOTAL	53 55	332	21	1430	258	101	132	160	185	215	242	284	356	460
KANSAS TOTAL	55	13	113	388	213	125	175	180	186	196	202	207	244	340
MINNESOTA TOTAL	53 55	86	26	675	166	71	81	98	114	134	158	199	240	283
MISSOURI TOTAL	53 55	73	16	458	145	46	74	92	112	131	146	172	196	277
LOUISIANA TOTAL	54 55	102	14	541	148	59	79	95	111	131	144	163	202	272
TEXAS TOTAL	53 55	269	6	1150	149	57	71	87	106	126	146	172	200	270
COLORADO TOTAL	54 55	49	65	440	170	83	103	125	139	159	179	196	219	259
UTAH TOTAL	53 55	53	70	932	275	101	130	143	162	189	244	298	360	658
ALASKA TOTAL	53 55	92	18	1000	235	76	114	141	163	182	202	255	350	449
CALIFORNIA TOTAL	53 55	196	32	1730	330	93	126	149	174	221	305	397	473	688
OREGON TOTAL	53 55	140	10	2356	399	84	130	168	205	248	305	394	403	
NEW ENGLND TOTAL	54 55	155	51	680	192	84	103	123	145	168	204	230	263	348
MID ATLNTC TOTAL	53 45	534	21	1340	255	103	129	158	185	214	239	278	342	464
MID EAST TOTAL	53 55	178	44	955	238	90	130	151	175	209	230	264	331	440
SOUTH EAST TOTAL	53 55	251	25	728	202	78	103	128	156	181	208	244	282	354
MID WEST TOTAL	53 55	619	21	1430	311	109	147	180	214	253	302	363	452	500
GRT PLAINS TOTAL	53 55	173	16	675	160	67	81	100	119	139	161	188	226	281
GULF SOUTH TOTAL	53 55	371	6	1150	149	57	73	90	107	128	146	170	200	270
ROCKY MNTN TOTAL	53 55	102	65	932	225	92	114	134	148	173	193	223	288	401
PAC COAST TOTAL	53 55	428	10	2356	332	85	124	149	180	216	277	365	452	709
GRAND TOTAL	53 55	2811	6	2356	249	82	111	137	163	193	226	271	344	469

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	54	11	51	153	102	54	64	70	76	106	125	137	148	162
	1	55	25	48	247	95	54	61	76	81	88	95	112	125	148
	1	54 55	36	48	247	97	54	62	73	80	88	102	116	134	148
LAKEHURST N J	1	55	22	25	520	101	46	54	72	78	83	88	95	112	125
KANAWHA CO W VA	1	54	26	56	257	134	76	83	95	106	120	137	148	168	226
	1	55	15	67	252	155	76	106	125	131	142	148	207	226	266
	1	54 55	41	56	257	141	72	87	102	116	131	142	159	207	244
HILLSBOROUGH CO FLA	1	53	4	79	149	110		83	83	90	90	90	148	148	175
	1	54	37	12	220	81	43	48	53	60	68	74	90	131	148
	1	55	19	15	482	137	46	64	76	112	125	137	157	175	226
	1	53 55	60	12	482	101	44	52	60	69	79	106	128	148	171
FULTON CO GEORGIA	1	53	2	66	159	112			76	76	76	76	76	175	175
	1	54	42	24	222	106	50	59	76	90	98	106	125	148	188
	1	55	20	31	301	96	33	50	59	70	81	90	106	125	175
	1	53 55	64	24	301	103	47	57	68	82	93	103	122	144	186
HAMILTON COUNTY OHIO	1	53	6	133	388	226	133	133	140	140	148	207	207	371	371
	1	54	55	33	355	122	39	50	64	79	98	120	148	199	255
	1	55	6	71	138	104	76	76	98	98	106	116	116	125	125
	1	53 55	67	33	388	130	43	53	71	90	109	128	145	201	255
TONKA BAY MINN	1	53	7	45	243	99	43	43	46	54	70	70	76	207	207
	1	54	37	41	630	102	44	48	56	64	78	84	98	125	175
	1	53 54	44	41	630	102	43	48	54	64	74	82	98	125	196
EDINA MINN	1	54	6	65	178	114	76	76	90	90	106	125	125	148	148
	1	55	23	17	349	105	20	38	49	54	90	101	125	148	244
	1	54 55	29	17	349	107	35	39	54	83	94	102	125	148	207
DENVER COUNTY COLO	1	54	21	30	141	78	39	46	54	61	76	85	98	112	125
	1	55	22	19	153	81	26	33	57	64	81	90	101	131	142
	1	54 55	43	19	153	80	31	44	56	62	78	88	100	116	137
SALT LAKE CO UTAH	1	53	1	138	138	138					148	148	148	148	148
	1	54	27	23	355	89	35	39	49	57	68	76	98	125	140
	1	55	20	24	211	83	43	48	52	57	62	70	90	125	162
	1	53 55	48	23	355	88	37	46	51	57	64	76	106	125	148
MULTONMAH CNTY ORE	1	54 55	17	50	451	186	76	90	101	125	175	207	266	305	323
GRAND TOTAL		53 55	471	12	630	103	43	53	64	77	89	106	126	146	202
NONURBAN															
LITCHFIELD CNTY CONN	1	54	5	17	81	50	17	17	33	33	46	46	83	83	90
	1	55	17	9	102	56	17	28	41	44	64	67	73	83	90
	1	54 55	22	9	102	55	16	28	40	43	46	67	73	83	90

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	54 55												
NUMBER OF SAMPLES		3	3	3	2	4	5			1	4	3	4
MAXIMUM		271	418	139	250	216	236			127	268	390	145
AVERAGE		196	344	127	178	167	160			127	156	226	101
MINIMUM		133	216	104	107	102	78			127	90	137	62
BOSTON MASS	54 55												
NUMBER OF SAMPLES		4	3	5	3	4	5				4	4	4
MAXIMUM		455	266	275	256	264	203				333	340	439
AVERAGE		378	243	175	163	151	141				255	278	278
MINIMUM		284	211	102	113	80	101				182	225	223
EVERETT MASS	54 55												
NUMBER OF SAMPLES		4	5	5	2	4	5				4	4	5
MAXIMUM		268	230	231	72	460	148				189	363	680
AVERAGE		214	185	156	69	215	109				138	210	242
MINIMUM		141	138	112	66	105	51				83	92	98
NEW YORK N Y	53 55												
NUMBER OF SAMPLES		11	10	20	12	11	17	5	2	4	3	12	10
MAXIMUM		390	300	693	561	514	439	292	196	355	730	970	606
AVERAGE		196	208	189	229	290	205	221	143	236	494	287	316
MINIMUM		93	102	21	101	90	50	68	90	130	230	80	78
PHILADELPHIA PA	53 55												
NUMBER OF SAMPLES		25	33	37	36	30	33	4	6	14	15	28	36
MAXIMUM		340	773	697	959	435	521	223	266	317	500	1176	1018
AVERAGE		335	286	239	254	243	203	172	152	203	292	403	353
MINIMUM		55	86	71	24	69	89	142	71	107	65	76	112
WASHINGTON DC	53 55												
NUMBER OF SAMPLES		4	7	8	7	7	9	3	4	4	5	3	4
MAXIMUM		456	454	403	256	345	278	226	232	251	562	955	721
AVERAGE		302	324	154	179	221	181	181	163	186	361	555	413
MINIMUM		138	196	63	71	125	108	145	113	125	240	180	230
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	6	4	4	9	7	4	4		6
MAXIMUM		141	289	180	323	212	190	344	160	310	685		600
AVERAGE		111	217	180	229	157	136	121	106	233	436		320
MINIMUM		81	141	180	126	132	82	44	77	197	182		161
CHARLESTON W VA	53 55												
NUMBER OF SAMPLES		2	4	5	6	7	6	4	3	5	5	4	8
MAXIMUM		559	567	449	433	314	322	314	232	435	580	480	625
AVERAGE		349	379	280	255	244	217	184	201	271	247	250	270
MINIMUM		140	156	130	91	170	60	89	146	214	125	128	123
TAMPA FLA	53 55												
NUMBER OF SAMPLES		8	8	9	7	5	5	4	4	4	3	4	9
MAXIMUM		312	282	394	242	195	254	142	105	105	200	275	377
AVERAGE		205	214	146	91	119	139	124	93	88	153	168	168
MINIMUM		127	155	32	25	37	70	108	75	83	104	100	70
ATLANTA GA	53 55												
NUMBER OF SAMPLES		11	16	14	10	9	9	5	4	3	3	3	8
MAXIMUM		449	475	390	185	409	236	288	406	298	280	728	474
AVERAGE		235	268	199	112	212	176	184	237	207	267	393	255
MINIMUM		56	121	28	73	95	81	122	151	74	244	186	120
CHATTANOOGA TENN	54 55												
NUMBER OF SAMPLES		17	11	4	6	3	3					12	30
MAXIMUM		543	727	281	228	313	223					465	509
AVERAGE		199	334	201	159	287	160					280	202
MINIMUM		48	87	150	53	235	94					98	46
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		13	17	16	11	18	35	17	15	18	10	14	16
MAXIMUM		156	890	643	567	1090	680	660	776	445	1409	1190	777
AVERAGE		403	477	347	297	312	271	272	312	190	726	497	407
MINIMUM		43	69	125	138	96	100	89	125	29	114	133	48
EAST CHICAGO IND	55												
NUMBER OF SAMPLES				8	7	4	6	2					
MAXIMUM				725	533	528	558	86					
AVERAGE				303	355	322	262	76					
MINIMUM				144	35	106	73	67					
DETROIT MICH	53 54												
NUMBER OF SAMPLES			5	3	3	2	2	2		1		33	
MAXIMUM			480	769	503	473	800	368		296		1045	
AVERAGE			402	575	416	381	508	304		296		543	
MINIMUM			290	254	323	290	216	240		296		106	
CINCINNATI OHIO	53 55												
NUMBER OF SAMPLES		19	33	80	28	24	23	17	14	23	15	26	30
MAXIMUM		617	648	891	531	743	530	270	233	401	720	1430	462
AVERAGE		262	255	284	223	256	230	138	153	200	256	439	247
MINIMUM		70	103	21	44	35	29	60	100	99	99	53	58

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MINNEAPOLIS MINN	53 55												
NUMBER OF SAMPLES		7	8	9	7	8	10	3	4	4	6	9	7
MAXIMUM		494	283	343	350	248	210	171	135	279	675	376	296
AVERAGE		231	209	178	125	154	102	124	100	140	270	166	160
MINIMUM		102	163	76	65	74	50	89	78	68	131	63	90
KANSAS CITY MO	53 55												
NUMBER OF SAMPLES		6	3	9	6	9	11	5	4	2	8	5	5
MAXIMUM		458	167	430	132	264	292	164	212	285	323	189	424
AVERAGE		208	143	171	91	119	110	118	118	184	175	138	179
MINIMUM		44	119	44	38	16	24	66	49	84	101	77	59
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		8	7	7	8	10	15	11	6	9	5	8	8
MAXIMUM		357	315	284	269	233	269	541	302	199	188	280	423
AVERAGE		217	152	112	137	133	134	161	170	107	123	128	206
MINIMUM		65	63	41	86	14	62	56	78	48	60	50	51
FT WORTH TEXAS	53 55												
NUMBER OF SAMPLES		3	7	11	5	7	10	4	4	6	4	7	5
MAXIMUM		190	292	370	129	193	190	90	139	204	162	392	309
AVERAGE		171	201	145	98	117	120	77	85	111	124	229	206
MINIMUM		152	126	16	75	58	58	58	47	32	86	133	110
LAKEWORTH TEXAS	53 55												
NUMBER OF SAMPLES		4	5	5	5	7	8	4	3	4	3	5	5
MAXIMUM		78	150	130	366	203	200	51	146	193	87	158	230
AVERAGE		74	95	65	138	103	68	49	97	93	78	129	139
MINIMUM		66	63	9	35	58	19	44	66	44	72	102	34
HOUSTON TEXAS	53 55												
NUMBER OF SAMPLES		7	7	10	6	8	14	6	6	4	7	10	12
MAXIMUM		194	319	573	304	369	266	91	248	275	1150	600	619
AVERAGE		159	179	236	119	170	114	70	154	177	298	269	305
MINIMUM		87	92	67	26	78	6	44	83	75	103	117	53
BELLAIRE TEXAS	53 55												
NUMBER OF SAMPLES		4	3	5	2	4	4	2	3	3	4	3	4
MAXIMUM		148	115	216	95	180	260	104	143	193	195	317	311
AVERAGE		115	72	160	91	135	146	90	117	123	125	195	144
MINIMUM		74	44	126	88	67	65	76	100	56	87	101	62
DENVER COL	54 55												
NUMBER OF SAMPLES		3	4	5	3	4	12	5	5	3	2	3	
MAXIMUM		238	181	440	207	218	240	224	227	127	374	339	
AVERAGE		191	155	260	172	127	118	150	188	115	273	282	
MINIMUM		153	144	153	120	86	65	69	174	101	172	243	
SALT LAKE CITY UTAH	53 55												
NUMBER OF SAMPLES		6	5	4	3	4	8	4	4	4	2	4	5
MAXIMUM		929	630	677	306	131	188	155	184	195	268	578	932
AVERAGE		537	488	336	203	120	145	126	126	147	245	378	350
MINIMUM		267	330	103	142	111	100	90	70	80	223	174	158
ANCHORAGE ALASKA	53 55												
NUMBER OF SAMPLES		7	8	7	10	8	9	2	4	6	6	6	10
MAXIMUM			637	406	930	365	230	181	227	239	670	454	525
AVERAGE		386	340	208	247	169	167	165	154	173	332	297	286
MINIMUM		124	84	86	39	40	120	150	82	113	162	139	114
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	4	7	2	2					
MAXIMUM			1433	985	666	810	494	421					
AVERAGE			1433	667	431	452	472	347					
MINIMUM			1433	434	181	228	450	274					
PASADENA CALIF	53 55												
NUMBER OF SAMPLES		3	6	6	5	7	9	4	2	2	4	3	4
MAXIMUM		506	1177	507	738	686	530	656	360	1093	1429	890	1730
AVERAGE		343	497	320	503	411	335	518	334	724	1022	623	1039
MINIMUM		178	210	174	297	166	150	426	309	355	395	390	361
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		4	6	4	3	7	15	3	2	3	4	5	4
MAXIMUM		454	746	309	259	351	188	217	294	215	344	1030	870
AVERAGE		280	558	166	149	201	114	193	228	187	226	310	441
MINIMUM		140	339	76	76	105	41	150	162	159	143	104	146
SAN JOSE CALIF	54 55												
NUMBER OF SAMPLES		2	4	7	6	6	6	2	2	4	3	5	3
MAXIMUM		719	205	204	436	243	145	227	143	332	262	465	849
AVERAGE		564	128	141	172	120	99	165	136	165	198	217	443
MINIMUM		409	55	57	32	47	48	103	129	81	164	89	203
PORTLAND OREGON	53 55												
NUMBER OF SAMPLES		12	8	16	6	8	9	4	4	5	29	23	14
MAXIMUM		456	300	664	338	280	275	226	230	240	1935	2356	1040
AVERAGE		214	166	220	162	154	170	191	166	194	507	932	382
MINIMUM		10	65	73	81	72	82	175	91	131	38	137	104

TABLE 2. ACETONE SOLUBLE ORGANIC MATTER—SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	54 55												
NUMBER OF SAMPLES		4	4	5	3	4	5				3	6	2
MAXIMUM		150	117	247	127	96	129				153	151	57
AVERAGE		106	87	99	90	82	105				138	100	54
MINIMUM		50	65	48	66	61	61				125	65	51
LAKEHURST N J	55												
NUMBER OF SAMPLES		7	6	1	4	2	2						
MAXIMUM		113	135	520	118	97	89						
AVERAGE		81	83	520	88	61	82						
MINIMUM		50	42	520	63	25	75						
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		2	4	3	3	6	5	3	2	5	2	4	2
MAXIMUM		205	251	232	208	257	146	147	231	122	114	221	251
AVERAGE		136	158	138	168	183	111	118	201	87	103	147	174
MINIMUM		67	114	75	138	103	63	80	172	56	93	82	97
HILLSBOROUGH CO FLA	53 55												
NUMBER OF SAMPLES		8	7	7	9	4	2	4	3	3	2	3	8
MAXIMUM		175	218	482	149	70	220	65	70	110	220	140	157
AVERAGE		106	110	156	85	46	121	56	65	73	134	99	117
MINIMUM		43	28	55	15	12	23	50	59	44	48	64	59
FULTON CO GEORGIA	53 55												
NUMBER OF SAMPLES		5	8	10	10	5	5	4	4	3	4	2	4
MAXIMUM		198	204	301	187	169	131	99	105	152	131	203	168
AVERAGE		128	124	119	72	95	104	77	65	108	106	144	115
MINIMUM		77	62	24	31	48	83	57	29	82	62	85	66
HAMILTON COUNTY OHIO	53 55												
NUMBER OF SAMPLES		6	8	12	3	5	3	4	4	4	4	7	7
MAXIMUM		188	279	322	95	210	220	37	126	76	138	362	388
AVERAGE		125	140	144	71	134	169	35	69	59	99	183	201
MINIMUM		69	68	42	52	53	89	33	38	46	77	39	112
TONKA BAY MINN	53 54												
NUMBER OF SAMPLES		3	4	4	4	4	4	3		4	4	6	4
MAXIMUM		161	142	101	200	262	128	630		61	91	243	65
AVERAGE		120	83	64	120	127	68	253		49	72	140	51
MINIMUM		76	57	41	77	45	41	53		43	41	65	45
EDINA MINN	54 55												
NUMBER OF SAMPLES		3	3	5	3	4	5					1	5
MAXIMUM		349	232	152	285	137	154					65	178
AVERAGE		181	154	93	112	60	75					65	124
MINIMUM		79	93	54	19	17	34					65	90
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES		3	3	5	4	3	4		4	4	5	4	4
MAXIMUM		132	140	133	86	153	145		140	87	141	123	115
AVERAGE		101	104	98	44	81	66		83	54	92	85	75
MINIMUM		57	86	75	19	28	26		43	30	51	54	46
SALT LAKE CO UTAH	53 55												
NUMBER OF SAMPLES		6	2	4	3	4	7	5	2	3	2	5	5
MAXIMUM		211	307	161	87	52	100	70	77	54	100	130	355
AVERAGE		143	179	106	69	47	58	53	72	43	76	70	147
MINIMUM		109	52	63	58	40	24	38	68	36	52	23	55
MULTNOMAH CNTY ORE	54 55												
NUMBER OF SAMPLES			1	1		2		1		1	6	5	
MAXIMUM			104	289		112		76		102	296	451	
AVERAGE			104	289		81		76		102	187	263	
MINIMUM			104	289		50		76		102	100	88	
NONURBAN													
LITCHFIELD CNTY CONN	54 55												
NUMBER OF SAMPLES		2	4	3	1	4	4			1	4		
MAXIMUM		113	100	43	26	102	76			81	80		
AVERAGE		97	81	23	26	58	56			81	42		
MINIMUM		81	68	9	26	30	40			81	17		

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻¹ MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT 10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	10	38	262	138	38	44	51	120	159	171	183	197	211
	1	56	45	12	281	113	48	56	71	84	104	123	138	155	211
	1	55 56	55	12	281	118	45	54	71	87	112	129	149	175	211
HARTFORD CONN	1	57	26	26	440	108	48	53	59	65	84	107	112	120	183
NEW HAVEN CONN	1	57	23	27	199	89	38	51	55	59	78	90	112	138	171
STAMFORD CONN	1	57	26	17	217	79	44	49	55	59	66	75	90	104	129
PORTLAND MAINE	1	57	18	15	290	98	29	51	55	68	82	90	138	149	171
BOSTON MASS	1	55	26	61	179	122	84	94	104	109	115	125	134	159	169
	1	56	46	35	615	137	62	74	86	109	117	131	152	178	222
	1	57	26	44	182	99	53	57	65	73	90	104	126	145	159
	1	55 57	98	35	615	123	61	73	85	104	113	123	138	161	179
PITTSFIELD MASS		55	7	20	117	63	22	22	38	64	68	68	73	78	78
		56	18	10	50	30	11	21	22	29	31	33	40	42	44
		55 56	25	10	117	39	17	21	29	31	38	40	44	51	73
EVERETT MASS	1	55	26	24	318	103	44	51	64	68	82	97	120	149	183
	1	56	43	36	291	101	48	60	64	68	84	95	104	129	197
	1	55 56	69	24	318	102	46	59	64	70	83	94	109	135	197
LAWRENCE MASS	1	57	26	17	123	47	18	21	27	29	36	42	62	73	84
LYNN MASS	1	57	21	21	333	101	33	51	59	68	76	84	120	138	211
SOMERVILLE MASS	1	57	26	17	120	57	31	38	46	49	55	61	66	73	78
WORCESTER MASS	1	57	26	20	137	69	25	38	51	61	68	78	85	90	112
MANCHESTER N H	1	57	17	16	107	52	25	30	33	38	44	51	59	78	97
PROVIDENCE R I	1	57	27	33	700	111	51	56	65	75	86	97	110	120	159
BURLINGTON VT	1	57	26	8	45	24	14	16	22	23	24	25	30	32	35
WILMINGTON DEL	1	57	28	38	410	125	55	65	80	88	97	109	129	159	232
ELIZABETH N J	1	55	19	27	284	121	29	65	78	90	115	120	129	138	262
	1	56	14	35	128	69	38	46	48	51	64	68	84	90	120
	1	55 56	33	27	284	99	38	49	63	68	84	104	116	127	183
PAULSBORO N J	1	55	22	23	160	80	44	51	57	68	78	84	90	112	120
	1	56	19	39	183	80	41	44	55	64	73	78	97	112	129
	1	55 56	41	23	183	80	42	49	55	62	76	85	99	112	129
CAMDEN N J	1	55	21	30	321	106	44	59	68	93	101	109	120	132	149
	1	56	18	55	234	123	68	75	78	97	104	129	159	167	183
	1	57	26	44	245	115	59	78	84	88	97	112	129	159	211
	1	55 57	65	30	321	114	57	71	85	93	101	112	130	151	211
PERTH AMBOY N J	1	55	19	45	184	89	47	50	59	65	78	84	108	116	159
	1	56	17	29	194	82	44	46	51	59	81	84	90	112	120
	1	55 56	36	29	194	86	46	48	54	62	78	86	104	115	149
TRENTON N J	1	55	14	18	318	89	19	38	44	55	59	81	87	90	211
	1	56	18	29	302	78	40	44	46	51	56	61	66	68	138
	1	55 56	32	18	318	83	36	41	48	53	57	64	78	90	197
JERSEY CITY N J	1	55	22	67	225	113	71	78	90	95	99	104	120	159	183
	1	56	18	48	467	124	59	68	78	90	104	120	132	138	159
	1	57	25	49	238	118	68	81	90	97	109	120	134	149	211
	1	55 57	65	48	467	118	66	78	87	95	103	115	130	146	192
EAST ORANGE N J	1	57	21	16	358	87	18	19	25	31	73	84	104	152	183
NEWARK N J	1	57	18	47	378	102	49	59	62	68	72	76	90	104	138
NEW YORK N Y	1	57	25	48	239	117	68	72	78	104	120	127	138	149	211
	2	55	16	37	402	134	44	48	59	68	104	138	171	211	262
	2	56	33	17	344	108	51	68	80	88	99	115	125	135	159
	2	55 56	49	17	402	116	46	62	73	85	101	120	131	149	197
	3	55	15	24	164	80	33	51	59	62	68	82	90	104	171
	3	56	24	18	311	83	24	33	44	68	73	78	90	120	138
	3	55 56	39	18	311	82	25	38	55	64	73	80	88	112	138
	4	55	9	26	85	55	29	33	51	55	59	59	64	68	84
		55	40	24	402	96	33	48	54	61	67	83	97	138	183
		56	57	17	344	97	33	54	69	77	86	101	120	131	149
		57	25	48	239	117	68	72	78	104	120	127	138	149	211
		55 57	122	17	402	101	38	54	64	74	85	102	122	136	175
BINGHAMTON N Y	1	57	26	32	173	68	38	41	46	51	64	68	73	84	104
BUFFALO N Y	1	57	6	22	123	53	22	22	29	29	38	51	51	78	78
	2	57	15	34	343	111	48	51	82	86	108	112	120	138	183
		57	21	22	343	95	29	38	49	73	86	108	116	129	159
SCHENECTADY N Y	1	57	22	19	236	49	24	26	31	34	37	44	48	54	59
SYRACUSE N Y	1	57	26	30	283	79	38	45	49	51	64	73	90	109	120

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) × 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
UTICA N Y	1	57	24	26	139	65	29	37	41	48	51	56	84	97	120
PHILADELPHIA PA	1	55	156	16	428	133	64	79	89	102	113	127	149	177	243
	1	56	307	34	731	141	66	80	93	108	120	131	149	182	226
	1	55 56	465	16	731	138	65	80	92	106	118	130	149	180	234
	4	55	20	123	469	215	138	159	169	178	188	197	206	262	347
	4	56	231	34	829	189	86	112	128	144	160	182	205	245	332
	4	57	25	48	277	133	68	81	90	125	138	146	159	183	204
	4	55 57	276	34	829	186	84	112	129	144	160	181	201	239	322
	5	55	16	24	229	87	30	31	33	41	59	65	68	138	222
	5	56	41	23	459	111	33	46	53	68	82	97	120	159	227
	5	55 56	57	23	459	104	31	38	49	59	73	90	115	159	224
	6	55	12	64	195	124	68	73	104	120	126	132	138	171	183
	6	56	42	42	616	127	59	69	77	90	101	125	142	164	183
	6	55 56	54	42	616	126	61	71	77	95	109	128	145	162	183
	7	55	6	129	308	199	138	138	159	159	183	211	211	280	280
	7	56	38	37	730	176	65	78	90	104	126	159	192	222	322
	7	55 56	44	37	730	179	65	82	97	120	138	165	197	232	322
		55	212	16	469	139	60	76	92	107	120	136	163	192	250
		56	659	23	829	157	65	82	100	116	130	147	173	204	268
		57	25	48	277	133	68	81	90	125	138	146	159	183	204
		55 57	896	16	829	152	64	81	97	113	128	145	170	200	260
ALTOONA PA	1	55	3	112	179	142		120	120	120	138	138	138	138	183
	1	56	24	35	490	115	38	48	59	73	84	104	132	159	211
	1	55 56	27	35	490	118	41	48	64	78	104	120	134	171	197
BRISTOL PA	1	55	22	7	158	69	17	33	51	55	59	73	90	101	120
	1	56	12	18	224	63	19	35	38	51	54	56	59	73	78
	1	55 56	34	7	224	67	19	36	44	53	57	64	76	94	120
CHESTER PA	1	55	23	34	350	91	40	44	53	56	68	82	90	112	183
	1	56	13	23	209	81	24	33	51	64	78	95	99	104	120
	1	55 56	36	23	350	87	38	43	53	57	68	86	97	112	138
ERIE PA	1	55	1	90	90	90					90	90	90	90	90
	1	56	48	8	106	46	23	25	30	38	43	51	59	64	75
	1	55 56	49	8	106	47	23	25	31	39	44	51	59	65	78
PITTSBURGH PA	1	56	71	10	322	116	41	62	85	95	104	120	134	159	204
	2	57	23	21	361	103	39	51	59	72	78	90	115	129	227
		56 57	95	10	361	112	41	57	76	90	101	114	130	152	211
WILLIAMSPORT PA	1	55	6	74	360	215	78	78	159	159	197	211	211	322	322
	1	56	40	44	414	156	95	108	116	125	135	151	188	206	235
	1	55 56	46	44	414	164	95	108	118	128	142	159	194	211	243
ALLENTOWN PA	1	57	19	21	97	59	29	44	48	51	61	64	68	75	84
JOHNSTOWN PA	1	57	11	18	235	107	19	51	59	71	78	120	159	183	211
LANCASTER PA	1	57	11	43	233	80	41	44	59	64	71	73	76	78	90
SCRANTON PA	1	57	26	24	301	123	38	48	56	68	78	120	159	227	280
WASHINGTON D C	2	55	25	41	365	148	68	90	114	120	145	159	183	197	227
	2	56	22	34	550	160	59	78	101	120	132	159	175	211	243
	2	55 56	47	34	550	154	68	90	107	120	138	159	179	202	227
	3	56	14	19	251	109	19	51	55	90	97	104	149	159	211
	3	57	26	9	162	64	30	33	37	41	47	51	59	90	145
	3	56 57	40	9	251	80	30	35	41	48	53	73	97	142	159
		55	25	41	365	148	68	90	114	120	145	159	183	197	227
		56	36	19	550	140	51	59	92	99	125	145	165	192	227
		57	26	9	162	64	30	33	37	41	47	51	59	90	145
		55 57	87	9	550	119	36	46	59	87	109	130	152	177	207
LOUISVILLE KY	1	55	20	30	706	188	51	68	78	93	98	104	211	243	491
	1	56	23	48	198	95	54	61	64	68	84	97	120	132	183
	1	57	1	110	110	110					120	120	120	120	120
	1	55 57	44	30	706	138	54	63	68	82	94	102	132	183	371
	2	55	14	29	276	138	29	51	68	112	120	138	183	227	262
	2	56	5	58	146	100	59	59	68	68	104	104	138	138	159
	2	55 56	19	29	276	128	44	59	68	104	120	129	149	183	243
	4	57	15	15	268	109	55	59	81	84	90	97	120	171	211
		55	34	29	706	167	44	65	78	97	104	138	211	235	371
		56	28	48	198	96	55	61	64	68	84	99	125	134	159
		57	16	15	268	109	55	59	81	84	90	104	112	171	183
		55 57	78	15	706	130	52	62	68	85	96	110	138	177	243
BALTIMORE MD	1	56	27	85	952	220	85	90	120	134	152	183	227	280	427
	1	57	26	25	336	112	54	59	82	90	98	112	126	159	175
	1	56 57	53	25	952	167	59	84	92	102	125	138	165	202	371
CHARLOTTE NC	1	57	25	23	531	132	41	46	51	73	109	120	159	175	280
WINSTON SALEM NC	1	57	26	12	298	84	22	38	49	52	56	68	78	138	159

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SAN JUAN PUERTO RICO	1	57	21	16	118	48	16	22	33	41	49	55	61	64	68
NORFOLK VA	1	57	25	33	163	85	38	53	59	64	78	86	109	120	154
RICHMOND VA	1	57	26	25	198	82	36	44	51	55	68	90	109	138	149
CHARLESTON W VA	2	55	17	36	367	126	44	51	68	90	112	120	138	197	211
	2	56	23	46	366	129	55	78	90	97	107	114	120	138	243
	2	57	23	24	227	82	25	38	42	48	56	68	97	129	183
	2	55 57	63	24	367	111	38	49	58	78	96	109	123	149	222
WHEELING W VA	1	56	11	53	261	113	55	59	73	78	104	120	138	159	183
	1	57	25	45	437	168	82	90	97	102	129	183	204	227	371
	1	56 57	36	45	437	152	71	82	94	99	112	138	183	211	280
BIRMINGHAM ALA	1	57	25	9	214	91	41	51	71	78	90	95	102	112	159
TAMPA FLA	1	55	22	32	247	92	46	51	65	71	78	90	104	129	171
	1	56	38	7	205	80	44	51	55	60	65	78	90	104	138
	1	57	26		99	54	34	37	42	46	51	59	68	76	82
	1	55 57	66		247	75	37	46	52	58	65	74	83	99	129
MIAMI FLA	1	57	25	31	111	55	31	32	36	40	48	59	68	84	99
ATLANTA GA	1	55	29	61	803	159	69	74	78	94	104	115	132	167	211
	1	56	34	63	525	149	78	85	90	110	120	131	152	175	301
	1	57	26	41	185	81	56	61	68	73	79	83	85	89	104
	1	55 57	89	41	803	132	65	73	80	86	94	109	126	154	211
COLUMBUS GA	1	57	27	35	221	80	39	40	43	51	73	81	90	120	149
JACKSON MISS	1	57	24	8	220	53	8	18	19	33	36	41	51	73	120
COLUMBIA SC	1	57	24	24	350	116	33	48	54	64	78	104	183	197	243
GREENVILLE SC	1	57	29	31	292	110	38	46	51	72	78	99	120	159	262
CHATTANOOGA TENN	3	55	18	9	251	84	31	48	51	56	61	66	73	78	159
	3	56	24	29	155	80	44	55	59	64	68	75	97	109	138
	3	57	13	29	597	139	29	38	48	51	68	159	171	183	211
	3	55 57	55	9	597	95	36	48	56	61	66	72	104	142	183
	4	55	21	84	733	226	95	104	120	129	159	211	232	322	491
	4	56	24	69	540	198	84	104	126	149	165	177	211	268	399
	4	57	18	44	367	176	104	120	126	138	152	167	183	227	322
	4	55 57	63	44	733	201	92	110	125	136	159	177	217	268	399
		55	39	9	733	160	48	59	68	95	120	134	159	227	322
		56	48	29	540	139	55	64	73	90	108	129	154	177	268
		57	31	29	597	160	38	51	104	126	149	164	178	211	322
		55 57	118	9	733	152	48	61	73	99	122	142	166	205	301
KNOXVILLE TENN	1	57	26	52	337	135	59	68	76	90	125	138	159	192	211
NASHVILLE TENN	1	57	28	35	560	107	51	57	62	73	82	88	109	120	183
CHICAGO ILL	1	55	37	52	500	195	96	104	138	150	167	192	232	271	322
	1	56	11	86	403	235	90	112	120	159	243	280	347	371	399
	1	55 56	48	52	500	204	96	115	138	151	171	211	250	280	359
	2	55	22	75	479	222	90	120	190	204	222	243	262	294	322
	2	56	13	54	575	236	59	104	138	159	255	268	280	301	427
	2	55 56	35	54	575	227	90	120	183	200	232	254	275	297	371
	4	55	48	8	232	96	23	39	44	68	76	108	138	152	197
	4	56	9	21	267	119	22	33	44	68	120	120	149	159	243
	4	55 56	57	8	267	99	23	33	44	68	78	110	141	156	211
	5	57	8	52	235	111	55	59	59	78	90	120	138	138	159
		55	107	8	500	156	40	69	92	117	144	163	202	237	280
		56	33	21	575	204	44	90	115	143	183	243	265	301	390
		57	8	52	235	111	55	59	59	78	90	120	138	138	159
		55 57	148	8	575	164	42	71	94	118	145	169	213	249	304
EAST ST LOUIS ILL	1	55	19	73	618	242	129	145	159	183	232	243	268	322	399
	1	56	30	68	414	167	90	101	109	115	126	159	197	243	322
	1	55 56	49	68	618	196	94	109	120	138	167	197	235	273	355
	2	55	18	26	428	139	33	75	78	90	104	126	138	159	301
	2	56	32	21	167	69	25	36	44	54	61	68	78	90	138
	2	55 56	50	21	428	94	29	40	54	66	75	84	99	129	171
		55	37	26	618	192	73	84	120	134	154	183	243	294	371
		56	62	21	414	116	36	51	66	80	96	110	125	175	243
		55 56	99	21	618	145	40	64	78	96	115	132	164	219	301
SPRINGFIELD ILL	1	57	20	19	212	73	31	35	38	49	59	68	78	112	138

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55	10	82	280	176	84	90	104	120	183	211	243	255	268
	1	56	15	78	361	166	90	120	138	143	154	159	183	211	243
	1	57	20	32	360	151	78	86	95	104	120	149	183	211	243
	1	55 57	45	32	361	161	82	90	108	126	149	165	197	224	268
	2	55	10	42	490	178	44	68	84	90	120	138	159	322	371
	2	56	15	82	363	154	94	97	104	109	120	145	159	183	322
	2	57	22	49	284	119	53	57	68	90	104	120	138	183	243
	2	55 57	47	42	490	143	57	68	90	102	115	132	152	211	294
	3	55	14	45	218	103	51	64	68	82	86	90	129	138	183
	3	56	19	42	448	153	44	73	90	104	129	138	171	211	280
	3	57	18	30	293	121	51	78	90	104	115	129	145	152	183
	3	55 57	51	30	448	128	51	68	80	94	114	129	146	171	232
	4	55	11	39	230	92	44	48	51	59	90	104	109	115	120
	4	56	19	26	285	104	44	54	59	71	78	97	112	159	183
	4	57	20	28	313	138	29	38	59	68	104	120	222	243	294
	4	55 57	50	26	313	115	38	51	58	68	90	106	118	183	243
		55	45	39	490	133	51	64	81	87	107	117	149	211	268
		56	68	26	448	142	56	75	92	104	120	145	162	183	262
		57	80	28	360	132	51	61	80	97	111	129	153	211	262
		55 57	193	26	490	136	52	67	83	98	113	132	156	199	264
EVANSVILLE IND	1	57	25	19	190	59	33	38	42	44	53	56	71	78	90
FORT WAYNE IND	1	57	28	32	282	102	38	53	57	68	84	99	120	138	202
INDIANAPOLIS IND	1	57	26	25	348	120	64	71	82	90	104	120	138	164	173
DETROIT MICH	2	56	30	60	344	119	68	85	92	98	104	110	116	129	183
	3	56	33	13	417	72	24	27	29	44	49	59	68	84	138
	4	57	23	38	270	102	44	57	68	81	90	104	112	120	175
		56	63	13	417	94	26	44	51	67	85	95	104	116	183
		57	23	38	270	102	44	57	68	81	90	104	112	120	175
		56 57	86	13	417	96	28	46	59	71	86	96	107	119	173
GRAND RAPIDS MICH	1	57	18	51	221	95	54	59	61	64	68	78	120	138	152
KALAMAZOO MICH	1	57	25	7	101	44	16	26	31	34	36	38	59	68	78
LANSING MICH	1	57	26	25	101	53	33	35	37	44	51	61	64	68	75
FLINT MICH	1	57	26	35	200	87	51	59	64	68	78	85	90	120	138
CINCINNATI OHIO	1	55	22	24	235	115	38	51	68	84	104	138	159	183	211
	1	56	43	33	545	142	48	71	80	87	126	152	173	197	291
	1	57	26	21	188	82	29	38	55	62	71	84	95	120	159
	1	55 57	91	21	545	119	37	54	68	79	90	125	156	178	211
YOUNGSTOWN OHIO	1	56	20	52	276	136	59	78	86	104	129	138	159	183	243
	1	57	26	35	490	145	46	51	59	84	104	132	149	183	280
	1	56 57	46	35	490	141	51	57	80	90	123	135	154	183	255
CANTON OHIO	1	57	26	49	314	145	68	78	104	112	126	145	159	211	243
CLEVELAND OHIO	1	57	26	38	291	119	59	68	76	84	110	120	143	159	183
COLUMBUS OHIO	1	57	29	26	307	109	42	59	73	95	107	112	120	138	183
TOLEDO OHIO	1	57	26	32	250	82	36	40	48	53	59	68	75	104	183
LORAIN OHIO	1	57	26	32	533	105	42	48	55	59	84	96	101	138	183
MILWAUKEE WIS	1	57	25	9	170	76	41	46	51	61	66	78	95	104	132
RACINE WIS	1	57	23	15	212	67	27	38	44	61	66	70	74	78	99
DES MOINES IOWA	1	57	26	6	183	72	33	41	46	49	55	68	84	104	138
KANSAS CITY KANSAS	1	55	10	35	285	134	38	78	90	112	120	129	138	159	243
	1	57	8	41	170	86	44	51	51	59	68	84	90	90	159
	1	55 57	18	35	285	112	44	59	68	82	90	120	138	149	183
	2	56	25	20	149	51	30	32	35	38	42	44	55	58	90
		55	10	35	285	134	38	78	90	112	120	129	138	159	243
		56	25	20	149	51	30	32	35	38	42	44	55	58	90
		57	8	41	170	86	44	51	51	59	68	84	90	90	159
		55 57	43	20	285	77	31	36	40	44	56	64	84	120	152
WICHITA KANSAS	1	57	26	18	61	37	24	29	32	34	37	40	42	46	49
MINNEAPOLIS MINN	1	55	69	25	397	85	35	45	50	57	67	75	88	120	149
	1	56	46	40	446	103	55	63	71	77	85	95	104	138	165
	1	57	26	9	181	67	25	33	44	49	64	71	78	97	120
	1	55 57	141	9	446	87	36	47	55	64	73	82	95	122	155
DULUTH MINN	1	57	25	20	280	75	41	46	51	59	64	68	78	90	129

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻¹ MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT 10	20	30	40	50	60	70	80	90
KANSAS CITY MO	2	55	16	61	298	132	68	78	97	104	115	138	145	159	183
	2	56	33	68	497	161	82	93	98	102	114	129	171	232	322
	2	57	26	28	301	96	33	49	64	73	82	88	97	143	154
	2	55 57	75	28	497	132	61	76	86	94	103	116	143	167	268
	4	55	19	15	300	59	16	17	23	24	29	31	54	59	120
	4	56	16	25	138	56	26	28	33	35	38	51	59	97	104
	4	55 56	35	15	300	58	17	23	26	29	35	44	57	78	120
		55	35	15	300	92	17	24	31	56	73	97	116	145	211
		56	49	25	497	127	33	51	82	94	100	107	120	171	262
		57	26	28	301	96	33	49	64	73	82	88	97	143	154
		55 57	110	15	497	109	26	36	59	78	91	101	117	149	232
ST LOUIS MO	1	55	26	59	302	155	90	96	104	115	132	167	183	222	243
	1	56	43	37	711	178	78	97	115	129	146	164	183	232	347
	1	57	25	22	271	115	44	80	88	95	108	116	138	152	211
	1	55 57	94	22	711	155	68	90	101	115	130	147	172	211	280
	2	55	25	85	503	208	109	120	138	152	192	202	227	280	371
	2	56	41	66	745	192	82	96	112	131	154	177	200	262	371
	2	55 56	66	66	745	198	90	104	125	138	159	191	206	268	355
		55	51	59	503	181	92	104	117	132	159	190	208	237	312
		56	84	37	745	185	80	96	114	131	147	167	195	243	355
		57	25	22	271	115	44	80	88	95	108	116	138	152	211
		55 57	160	22	745	173	81	95	108	125	141	163	192	227	310
BRENTWOOD MO	1	55	15	38	437	141	51	68	90	97	112	120	138	211	280
	1	56	17	7	109	56	17	22	25	38	59	68	84	90	97
	1	55 56	32	7	437	96	22	33	51	68	84	90	101	120	211
BRECKENRIDGE MO	1	55	11	42	578	181	44	48	51	97	112	120	183	347	371
	1	56	15	36	540	140	59	62	68	84	126	132	159	183	243
	1	55 56	26	36	578	157	48	59	68	90	112	132	159	211	347
OMAHA NEB	1	57	26	31	158	67	33	40	45	48	54	64	78	95	104
LINCOLN NEB	1	57	26	24	175	56	35	38	43	45	48	50	59	71	78
BISMARCK ND	1	57	24	17	90	38	16	25	28	34	36	38	43	51	68
SIOUX FALLS SD	1	57	26	5	75	38	22	24	28	30	38	43	46	51	59
LITTLE ROCK ARK	1	57	26	24	174	58	27	28	33	40	44	48	50	86	104
NEW ORLEANS LA	2	55	19	21	144	62	22	28	38	44	54	56	82	90	104
	2	56	20	16	95	47	25	29	38	40	42	44	49	59	78
	2	55 56	39	16	144	54	25	28	38	41	44	49	57	81	95
	3	55	25	38	228	99	44	62	78	86	96	101	112	120	197
	3	56	21	27	558	143	38	59	73	90	120	129	138	183	301
	3	57	26	24	416	113	38	42	59	73	86	112	126	159	211
	3	55 57	72	24	558	117	39	56	70	83	96	110	124	159	222
		55	44	21	228	83	28	41	53	65	82	90	100	110	138
		56	41	16	558	96	28	38	42	49	64	78	104	129	183
		57	26	24	416	113	38	42	59	73	86	112	126	159	211
		55 57	111	16	558	95	28	40	48	59	78	90	106	126	190
BATON ROUGE LA	1	57	24	35	315	129	55	78	86	104	110	117	138	159	268
ALBUQUERQUE NM	1	57	22	61	410	180	78	86	99	138	159	183	211	280	322
TULSA OKLA	1	57	20	8	67	26	8	17	21	23	24	25	28	33	42
FT WORTH TEXAS	1	55	26	39	196	84	48	54	64	70	76	84	90	112	129
	1	56	45	21	327	80	31	39	44	53	58	64	90	101	159
	1	55 56	71	21	327	82	33	43	52	57	65	75	90	104	138
LAKEWORTH TEXAS	1	55	9	16	73	35	16	17	18	19	25	25	44	55	59
HOUSTON TEXAS	1	55	30	37	405	112	42	59	68	78	87	97	120	152	211
	1	56	36	12	214	68	22	29	40	44	56	68	86	104	126
	1	55 56	66	12	405	88	29	40	52	59	73	87	98	125	154
	2	57	26	20	284	81	28	34	38	41	51	73	90	104	152
		55	30	37	405	112	42	59	68	78	87	97	120	152	211
		56	36	12	214	68	22	29	40	44	56	68	86	104	126
		57	26	20	284	81	28	34	38	41	51	73	90	104	152
		55 57	92	12	405	86	27	38	43	57	68	83	96	125	156
BELLAIRE TEXAS	1	55	16	16	143	61	38	41	48	51	54	57	59	68	90
	1	56	7	39	222	106	41	41	44	51	78	78	159	183	183
	1	55 56	23	16	222	74	38	43	46	51	56	59	68	90	159
DALLAS TEXAS	1	57	25	17	147	70	36	40	46	51	57	68	90	104	132
SAN ANTONIO TEXAS	1	57	26	16	79	43	21	23	24	30	41	47	50	70	74
EL PASO TEXAS	1	57	28	17	187	70	19	36	40	46	54	64	78	109	138
CORPUS CHRISTI TEXAS	1	57	26	14	77	29	16	17	22	23	25	28	31	38	48

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
DENVER COL	1	55	27	17	424	164	71	78	97	120	134	149	171	280	322
	1	56	40	38	385	127	61	71	83	95	110	124	138	159	205
	1	57	25	26	264	105	46	51	71	78	96	101	138	159	183
	1	55 57	92	17	424	132	53	70	83	96	110	127	146	176	243
BOISE IDAHO	1	57	34	25	237	88	40	46	51	59	82	88	112	120	159
HELENA MONTANA	1	57	25		42	21	8	9	16	18	22	24	27	29	38
SALT LAKE CITY UTAH	2	55	22	69	315	159	84	104	114	120	145	159	183	227	280
	2	56	29	29	467	125	46	55	68	76	86	94	104	171	280
	2	57	24	39	262	81	42	48	51	59	65	71	78	90	159
	2	55 57	75	29	467	121	47	56	69	77	90	106	138	173	255
CHEYENNE WYO	1	57	27	8	96	42	17	25	27	31	36	40	48	56	84
ANCHORAGE ALASKA	1	55	7	35	168	117	38	38	104	125	129	129	134	138	138
	1	57	23	40	153	91	44	48	51	75	86	104	126	138	151
	1	55 57	30	35	168	97	44	48	71	82	97	123	130	138	151
	2	55	5	213	532	321	227	227	243	243	280	280	371	371	565
	2	57	7	57	312	108	55	55	59	68	78	78	90	120	120
	2	55 57	12	57	532	197	55	59	78	90	120	227	243	322	371
		55	12	35	532	202	38	104	129	134	138	183	227	280	371
		57	30	40	312	95	45	50	59	73	81	90	120	138	151
		55 57	42	35	532	126	45	51	73	84	104	125	135	155	243
PHOENIX ARIZ	1	57	26	37	587	164	51	68	78	84	104	159	183	291	312
LOS ANGELES CALIF	3	57	24	36	561	261	44	115	138	171	219	235	399	448	516
SAN FRANCISCO CALIF	1	55	18	8	89	32	17	23	24	26	29	35	38	40	44
	1	56	25	9	108	34	9	15	16	17	25	33	44	51	78
	1	55 56	43	8	108	33	9	16	18	24	28	34	39	44	59
	2	57	31	15	335	77	25	31	36	49	61	68	84	112	159
		55 57	74	8	335	51	15	18	25	31	36	44	55	71	109
PASADENA CALIF	1	55	14	83	316	209	90	159	171	197	211	227	262	280	308
	1	56	46	9	771	226	86	112	142	159	192	227	249	280	371
	1	57	24	65	368	171	78	104	110	120	138	159	243	258	280
	1	55 57	84	9	771	207	84	110	131	156	183	221	249	271	316
BERKELEY CALIF	1	55	15	27	173	83	48	51	62	65	73	78	90	104	159
SAN JOSE CALIF	1	55	24	17	298	106	22	38	73	84	90	104	116	138	243
	1	56	43	31	203	89	34	48	56	63	73	90	104	120	183
	1	57	25	17	210	68	27	31	38	55	62	65	73	90	138
	1	55 57	92	17	298	87	30	37	54	63	72	85	102	125	183
SAN LEANDRO CALIF	1	55	62	50	631	165	80	90	104	112	120	141	159	211	347
	1	56	41	28	536	126	59	80	88	98	116	129	142	159	183
	1	55 56	103	28	631	150	71	86	97	108	119	135	152	175	255
SAN DIEGO CALIF	1	57	26	23	464	106	31	33	51	56	68	84	120	159	222
BURBANK CALIF	1	57	26	42	607	203	51	59	94	101	138	252	271	308	347
SAN BERNARDINO CALIF	1	57	23	32	790	195	51	84	104	120	169	178	192	211	459
HONOLULU HAWAII	1	56	23	15	107	54	21	35	38	49	54	57	62	68	97
	1	57	28	15	67	33	17	22	23	25	27	31	44	48	59
	1	56 57	51	15	107	43	20	23	25	29	38	48	54	61	68
	2	56	11	8	44	27	8	17	18	19	27	29	33	40	42
		56	34	8	107	45	17	22	27	36	42	49	56	62	90
		57	28	15	67	33	17	22	23	25	27	31	44	48	59
		56 57	62	8	107	40	17	21	25	28	34	43	49	58	67
LAS VEGAS NEVADA	1	57	26	25	167	76	38	44	53	57	68	78	90	112	129
PORTLAND OREGON	1	55	53	34	253	94	45	54	65	75	82	86	97	138	165
	1	56	30	25	400	122	41	51	64	73	90	101	115	138	347
	1	57	26	8	438	89	29	34	38	44	70	76	90	112	197
	1	55 57	109	8	438	100	39	47	59	71	79	87	102	134	183
	2	55	9	46	95	66	48	51	59	62	65	65	68	78	90
	2	56	13	42	341	105	41	51	55	59	84	90	97	104	243
	2	55 56	22	42	341	89	44	49	56	62	68	78	86	99	120
	4	55	6	33	155	92	33	33	44	44	51	145	145	152	152
		55	68	33	253	90	45	51	59	69	79	85	95	138	156
		56	43	25	400	117	41	51	59	72	86	97	108	129	338
		57	26	8	438	89	29	34	38	44	70	76	90	112	197
		55 57	137	8	438	98	40	47	57	69	77	86	100	134	178
SEATTLE WASH	1	57	25	16	232	99	33	44	64	68	90	104	132	149	183

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS—STATE TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 57	130	12	440	103	43	52	58	68	85	105	122	149	142
MAINE TOTAL	57	18	15	290	98	29	51	55	68	82	90	138	149	171
MASSACHUSETS TOTAL	55 57	293	10	615	91	31	44	58	66	75	89	109	128	166
NEW HAMPSHRE TOTAL	57	17	16	107	52	25	30	33	38	44	51	59	78	97
RHODE ISLAND TOTAL	57	27	33	700	111	51	56	65	75	86	97	110	120	159
VERMONT TOTAL	57	26	8	45	24	14	16	22	23	24	25	30	32	35
DELAWARE TOTAL	57	28	38	410	125	55	65	80	88	97	109	1[illegible]9	159	232
NEW JERSEY TOTAL	55 57	311	16	467	100	43	53	64	76	86	98	114	133	175
NEW YORK TOTAL	55 57	241	17	402	86	33	42	50	61	71	83	102	123	154
PENNSYLVANIA TOTAL	55 57	1249	7	829	137	49	68	82	100	116	133	156	190	241
DIS COLUMBIA TOTAL	55 57	87	9	550	119	36	46	59	87	109	130	152	177	207
KENTUCKY TOTAL	55 57	78	15	706	130	52	62	68	85	96	110	138	177	243
MARYLAND TOTAL	56 57	53	25	952	167	59	84	92	102	125	138	165	202	371
NO CAROLINA TOTAL	57	51	12	531	107	33	45	49	54	71	107	126	159	227
PUERTO RICO TOTAL	57	21	16	118	48	16	22	33	41	49	55	61	64	68
VIRGINIA TOTAL	57	51	25	198	84	36	48	54	59	71	87	109	138	151
WEST VIRGINA TOTAL	55 57	99	24	437	126	44	56	76	92	101	115	134	190	237
ALABAMA TOTAL	57	25	9	214	91	41	51	71	78	90	95	102	112	159
FLORIDA TOTAL	55 57	111		247	71	33	41	48	55	63	70	61	95	120
GEORGIA TOTAL	55 57	116	35	803	120	51	66	75	82	88	104	120	145	163
MISSISSIPPI TOTAL	57	24	8	220	53	8	18	19	33	36	41	51	73	120
SO CAROLINA TOTAL	57	53	24	350	113	38	46	54	68	78	104	138	189	255
TENNESSEE TOTAL	55 57	172	9	733	142	51	61	72	89	113	132	156	191	271
ILLINOIS TOTAL	55 57	267	6	618	150	39	61	78	102	124	149	167	236	295
INDIANA TOTAL	55 57	272	19	490	124	44	57	73	87	102	118	144	177	241
MICHIGAN TOTAL	56 57	181	7	417	81	29	37	50	60	67	79	93	109	143
OHIO TOTAL	55 57	297	21	1231	54	43	55	7	80				90	80
WISCONSIN TOTAL	57	48	9	212	71	29	43	49	61	65	71	82	95	120
IOWA TOTAL	57	26	6	183	72	33	41	46	49	55	68	84	104	138
KANSAS TOTAL	55 57	69	18	285	62	29	32	36	40	43	50	57	81	132
MINNESOTA TOTAL	55 57	166	9	446	85	36	47	54	63	71	79	91	118	146
MISSOURI TOTAL	55 57	334	7	745	142	37	66	86	98	113	132	157	200	260
NEBRASKA TOTAL	57	52	24	175	62	33	39	44	47	49	55	66	82	101
NORTH DAKOTA TOTAL	57	24	17	90	38	16	25	28	34	36	38	43	51	68
SOUTH DAKOTA TOTAL	57	26	5	75	38	22	24	28	30	38	43	46	51	59
ARKANSAS TOTAL	57	26	24	174	58	27	28	33	40	44	48	50	86	104
LOUISIANA TOTAL	55 57	135	16	558	101	34	42	55	68	84	97	113	131	204
NEW MEXICO TOTAL	57	22	61	410	180	78	86	99	138	159	183	211	280	322
OKLAHOVA TOTAL	57	20	8	67	26	8	17	21	23	24	25	28	33	42
TEXAS TOTAL	55 57	300	12	405	71	23	32	40	47	55	65	79	98	138
COLORADO TOTAL	55 57	92	17	424	132	53	70	83	96	110	127	146	176	243
IDAHO TOTAL	57	34	25	237	88	40	46	51	59	82	88	112	120	159
MONTANA TOTAL	57	25		42	21	8	9	13	18	22	24	27	29	38
UTAH TOTAL	55 57	75	29	467	121	47	56	65	77	90	106	138	173	255
WYOMING TOTAL	57	27	8	96	42	17	25	27	31	36	40	48	56	84
ALASKA TOTAL	55 57	42	16	532	105	33	40	49	68	80	97	127	142	163
ARIZONA TOTAL	57	28	37	587	164	51	68	78	84	104	159	163	291	312
CALIFORNIA TOTAL	55 57	467	8	790	139	31	49	67	85	105	124	158	206	275
HAWAII TOTAL	56 57	62	8	107	40	17	21	25	28	34	45	49	58	67
NEVADA TOTAL	57	26	25	167	76	38	44	53	57	68	78	90	112	129
OREGON TOTAL	55 57	137	8	438	98	40	47	57	69	77	86	100	134	178
WASHINGTON TOTAL	57	25	16	232	99	33	44	64	68	90	104	132	149	163

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS—REGIONAL AND GRAND TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW ENGLND TOTAL	55 57	511	8	700	91	29	42	53	63	74	88	109	129	169
MID ATLNTC TOTAL	55 57	1829	7	829	124	44	59	73	87	104	121	139	173	224
MID EAST TOTAL	55 57	440	9	952	119	38	51	61	79	95	112	135	166	220
SOUTH EAST TOTAL	55 57	501		803	111	38	50	62	72	83	98	120	153	207
MID WEST TOTAL	55 57	1065	7	618	119	38	53	65	78	94	113	139	174	30
GRT PLAINS TOTAL	55 57	697	5	745	104	31	41	50	63	80	95	117	146	207
GULF SOUTH TOTAL	55 57	503	8	558	81	24	33	41	50	60	75	91	115	157
ROCKY MNTN TOTAL	55 57	253		467	102	26	41	52	68	82	98	117	149	201
PAC COAST TOTAL	55 57	785	8	790	119	29	43	56	71	86	105	132	170	248
GRAND TOTAL	55 57	6584		952	113	34	47	60	74	88	106	128	159	218

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
MIDDLESEX CNTY MASS	1	55	26	17	120	61	25	28	48	55	62	67	73	93	98
	1	56	44	9	200	48	19	26	32	37	42	46	50	59	73
	1	55 56	70	9	200	52	20	27	34	40	47	53	62	68	95
LAKEHURST N J	1	55	17	19	116	40	21	22	25	31	33	35	38	42	44
	1	56	17	24	124	45	24	25	31	32	36	38	51	59	68
	1	55 56	34	19	124	42	22	24	30	32	33	36	42	51	78
KANAWHA CO W VA	1	55	17	25	162	64	25	36	44	51	55	57	82	90	104
	1	56	7	36	187	82	38	38	46	49	51	51	59	159	159
	1	55 56	24	25	187	69	25	38	45	50	53	56	82	90	159
HILLSBOROUGH CO FLA	1	55	19	16	111	39	18	19	28	31	34	36	38	48	59
	1	56	25	10	80	33	13	18	22	27	31	32	38	44	68
	1	55 56	44	10	111	36	17	19	25	29	31	34	38	46	68
FULTON CO GEORGIA	1	55	7	39	60	48	41	41	44	46	49	49	51	59	59
DENVER COUNTY COLO	1	55	20	9	77	34	10	18	19	21	29	36	41	59	71
	1	56	30	13	158	53	23	24	35	45	47	56	62	72	82
	1	55 56	50	9	158	45	18	22	24	34	39	49	57	71	77
SALT LAKE CO UTAH	1	55	7	17	50	30	17	17	24	25	29	29	36	38	38
MULTNOMAH CNTY ORE	1	55	5	19	73	46	19	19	38	38	51	51	59	59	78
GRAND TOTAL		55 56	241	9	200	47	19	24	30	35	40	47	53	65	86

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^1											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
LITCHFIELD CNTY CONN	1	55	16	8	32	19	8	14	15	16	17	19	22	24	25
	1	56	24	1	96	23	7	9	15	16	17	23	27	30	38
	1	55 56	40	1	96	21	8	14	15	16	17	22	24	29	32
ACADIA NATNL PARK ME	1	57	18	9	39	19	10	13	17	18	19	20	21	21	29
MT MANSFIELD FRST VT	1	57	7	8	17	10	7	7	8	8	8	8	9	16	16
WORCESTER COUNTY MD	1	57	24	23	159	67	31	49	52	56	59	64	78	84	104
CAPE HATTERAS NC	1	57	8	25	133	41	25	26	26	27	27	28	29	29	33
SHENANDOAH PARK VA	1	57	25		61	17	7	8	9	15	15	16	17	19	38
HOLLY RIVER PK W VA	1	57	25	8	26	18	8	14	15	16	17	18	23	24	26
GULF SHORES PARK ALA	1	57	13		23	9	1	6	7	7	8	8	14	15	17
FLORIDA KEYS FLORIDA	1	57	14		30	15	1	8	8	15	15	16	17	17	25
OATLAND ISLAND GA	1	57	16	10	158	38	17	19	22	25	29	32	33	51	55
JACKSON COUNTY MISS	1	57	20	8	32	20	8	15	15	16	17	23	24	29	31
FT DONELSON TENN	1	57	17	7	48	19	7	8	14	16	20	21	23	25	33
SANGAMON COUNTY ILL	1	57	16	9	73	28	15	16	18	19	24	26	28	33	44
HURON COUNTY MICH	1	57	34		34	15	7	8	8	14	15	16	17	19	28
PERRYS MEMORIAL OHIO	1	57	8	17	43	24	15	16	16	17	19	27	29	29	38
ELLIS COUNTY KANSAS	1	57	11	6	26	12	6	6	7	7	8	9	16	17	25
COOK COUNTY MINN	1	57	18	8	44	20	8	14	15	16	17	23	24	25	31
SHANNON COUNTY MO	1	57	18		30	10	1	7	7	7	8	15	16	16	17
THOMAS COUNTY NEBR	1	57	12	9	53	26	8	9	18	19	26	28	29	38	55
WARD COUNTY N D	1	57	13		25	11		7	7	8	8	15	16	16	22
BLACK HILLS FRST S D	1	57	5		20	12	1	1	10	10	11	11	19	19	22
CRATERS MOON IDAHO	1	57	2		8	4			1	1	1	1	1	8	8
YELLOWSTONE PARK WYO	1	57	5	8	43	15	7	7	8	8	8	8	9	9	44
PT WORONZOF ALASKA	1	55	7	21	135	57	22	22	29	38	44	44	59	90	90
	1	56	42	4	124	24	4	6	8	9	11	22	25	38	57
	1	57	6		23	12	1	1	8	8	8	16	16	17	17
	1	55 57	55		135	27	4	7	8	10	20	23	30	44	59
GRAND CANYON ARIZ	1	57	26		84	10	1	5	7	8	8	8	9	9	11
WAIMANOLO HAWAII	1	57	23	8	49	20	8	9	15	16	17	18	23	25	41
GRAND TOTAL		55 57	473		159	22	7	8	10	15	16	19	24	29	43

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		1	3	5	4	4	3	5	6	5	7	6	6
MAXIMUM		174	206	186	145	144	130	96	87	112	235	281	262
AVERAGE		174	132	144	124	73	97	61	62	80	140	178	163
MINIMUM		174	58	83	94	40	48	12	38	49	49	50	58
HARTFORD CONN	57												
NUMBER OF SAMPLES		2	2	3	2	2	1	3	2	2	2	3	2
MAXIMUM		118	245	440	73	100	54	59	53	130	89	181	232
AVERAGE		115	181	305	67	80	54	50	51	105	67	108	173
MINIMUM		112	118	60	62	61	54	34	50	81	45	26	115
NEW HAVEN CONN	57												
NUMBER OF SAMPLES		2	2	2	2	2	1	3	2	1	3	1	2
MAXIMUM		106	148	107	60	54	61	75	99	148	160	172	199
AVERAGE		74	101	80	49	40	61	58	92	148	95	172	165
MINIMUM		43	54	53	38	27	61	43	85	148	48	172	131
STAMFORD CONN	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	3	1	3	1	2	3
MAXIMUM		64	167	97	68	83	96	97	64	119	127	50	217
AVERAGE		54	146	57	57	57	76	77	64	78	127	48	122
MINIMUM		44	125	17	46	35	56	59	64	57	127	47	72
PORTLAND MAINE	57												
NUMBER OF SAMPLES			1	2	2	2	2	2		1	1	2	3
MAXIMUM			126	162	151	52	54	49		79	290	146	171
AVERAGE			126	120	112	33	40	44		79	290	130	104
MINIMUM			126	79	74	15	26	39		79	290	114	64
BOSTON MASS	55 57												
NUMBER OF SAMPLES		6	6	6	6	6	7	12	11	10	11	10	7
MAXIMUM		615	173	225	310	228	110	112	162	124	231	179	202
AVERAGE		222	128	155	139	126	78	72	94	91	161	127	146
MINIMUM		86	86	70	54	71	48	35	62	53	119	81	94
PITTSFIELD MASS	55 56												
NUMBER OF SAMPLES		1	2	2	2	2	2	2	2	3	3	2	2
MAXIMUM		40	50	47	33	39	31	40	27	117	61	26	68
AVERAGE		40	40	44	27	35	26	40	18	85	30	21	51
MINIMUM		40	31	41	21	32	22	40	10	70	11	16	35
EVERETT MASS	55 56												
NUMBER OF SAMPLES		4	5	4	4	5	4	9	9	8	8	5	4
MAXIMUM		265	95	291	83	153	111	146	318	190	283	236	103
AVERAGE		167	74	162	72	71	82	68	114	111	129	107	75
MINIMUM		68	45	94	61	36	53	38	46	72	48	62	24
LAWRENCE MASS	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	3	2	2	2
MAXIMUM		17	70	61	19	41	39	60	89	117	29	123	70
AVERAGE		17	48	39	19	35	35	39	64	75	25	94	51
MINIMUM		17	27	20	19	29	32	19	39	29	22	66	33
LYNN MASS	57												
NUMBER OF SAMPLES			1	1	2	3	2	2	1	2	3	2	2
MAXIMUM			68	74	240	71	187	126	134	68	333	53	80
AVERAGE			68	74	147	45	133	122	134	54	187	43	75
MINIMUM			68	74	54	21	80	119	134	41	76	33	70
SOMERVILLE MASS	57												
NUMBER OF SAMPLES		2	2	3	2	1	2	3	2	3	2	2	2
MAXIMUM		73	65	94	120	59	75	47	91	76	48	65	77
AVERAGE		45	58	59	93	59	58	37	75	57	41	62	54
MINIMUM		17	52	33	66	59	41	24	60	48	34	59	32
WORCESTER MASS	57												
NUMBER OF SAMPLES		3	2	3	1	2	3	3	2	3	2	1	3
MAXIMUM		121	110	82	92	82	79	67	59	78	62	137	87
AVERAGE		106	89	76	92	51	71	50	41	60	54	137	49
MINIMUM		91	69	66	92	20	57	33	24	34	46	137	24
MANCHESTER N H	57												
NUMBER OF SAMPLES			1	2	2	2	1	1	2	1	2	1	2
MAXIMUM			73	55	99	49	33	33	56	68	107	24	101
AVERAGE			73	47	57	45	33	33	43	68	72	24	69
MINIMUM			73	39	16	42	33	33	31	68	37	24	37
PROVIDENCE R I	57												
NUMBER OF SAMPLES		2	2	2	1	1	3	2	3	1	6	1	3
MAXIMUM		101	700	121	62	70	52	85	78	47	172	146	167
AVERAGE		92	400	118	62	70	44	79	70	47	113	146	91
MINIMUM		83	101	115	62	70	33	73	65	47	83	146	52
BURLINGTON VT	57												
NUMBER OF SAMPLES		2	3	1	2	2	3	2	2	2	2	3	2
MAXIMUM		34	45	31	32	24	25	34	33	32	34	24	33
AVERAGE		24	30	31	28	24	19	21	24	24	28	18	29
MINIMUM		14	22	31	24	24	15	8	15	16	23	8	26
WILMINGTON DE	57												
NUMBER OF SAMPLES		2	2	2	2	3	3	2	3	1	2	5	1
MAXIMUM		215	136	235	107	118	145	87	108	67	96	332	410
AVERAGE		141	88	201	98	96	91	72	82	67	81	170	410
MINIMUM		68	41	167	90	79	38	57	52	67	67	79	410

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	4	3	4			4	4	4	1	2	4
MAXIMUM		98	109	128	68			122	132	275	63	284	249
AVERAGE		61	77	85	54			86	108	150	63	222	104
MINIMUM		35	46	45	42			65	62	86	63	161	27
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		4	4	3	4	4		4	3	4	4	3	4
MAXIMUM		134	183	82	57	61		117	107	160	105	142	75
AVERAGE		103	129	73	48	47		92	69	93	64	107	59
MINIMUM		70	98	62	41	39		73	23	52	39	85	50
CAMDEN N J	55 57												
NUMBER OF SAMPLES		6	6	5	6	6	2	5	6	6	4	7	6
MAXIMUM		155	213	245	189	161	105	138	113	163	100	321	214
AVERAGE		112	114	153	112	121	92	91	93	79	78	160	134
MINIMUM		72	44	84	55	77	80	66	59	30	57	91	54
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		5	3	3	3	3		4	3	3	2	3	4
MAXIMUM		194	115	95	80	150		106	119	54	105	181	184
AVERAGE		88	84	77	56	102		81	77	48	76	104	130
MINIMUM		29	59	56	43	77		61	46	45	47	47	67
TRENTON N J	55 56												
NUMBER OF SAMPLES		4	4	3	3	4		2	2		3	3	4
MAXIMUM		68	302	67	133	53		81	56		80	191	318
AVERAGE		50	150	64	77	47		58	46		46	123	133
MINIMUM		41	53	60	29	43		36	36		18	53	51
JERSEY CITY N J	55 57												
NUMBER OF SAMPLES		5	6	5	6	6	2	7	6	5	7	5	5
MAXIMUM		467	199	197	130	103	123	176	238	160	140	225	220
AVERAGE		190	125	119	85	80	101	110	118	102	92	146	168
MINIMUM		63	86	49	48	59	79	67	74	67	63	109	104
EAST ORANGE N J	57												
NUMBER OF SAMPLES		3	2	3	1	2	1	2	2	2		1	2
MAXIMUM		31	201	26	151	86	145	75	92	173		24	358
AVERAGE		22	121	20	151	55	145	53	80	130		24	253
MINIMUM		18	41	16	151	25	145	31	69	88		24	148
NEWARK N J	57												
NUMBER OF SAMPLES		2	2	2	3	1	2	1	1	2	2		
MAXIMUM		105	102	300	378	52	83	47	63	51	74		
AVERAGE		89	85	185	192	52	77	47	63	50	67		
MINIMUM		74	68	70	74	52	71	47	63	49	61		
NEW YORK N Y	55 57												
NUMBER OF SAMPLES		6	9	9	7	9	7	15	15	16	14	7	
MAXIMUM		239	344	186	159	165	127	104	189	130	402	272	178
AVERAGE		124	151	122	118	91	82	55	79	83	142	125	90
MINIMUM		33	54	71	62	36	17	18	23	44	58	59	24
BINGHAMTON N Y	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	2	3	2	2
MAXIMUM		160	82	173	108	96	49	34	68	50	75	81	71
AVERAGE		100	74	97	108	69	40	33	65	47	60	74	66
MINIMUM		41	66	48	108	41	32	33	63	44	44	67	62
BUFFALO N Y	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	1	2	1	1	1
MAXIMUM		35	46	123	343	122	181	88	70	106	79	114	50
AVERAGE		28	36	96	196	78	144	83	70	105	79	114	50
MINIMUM		22	26	70	50	34	114	79	70	105	79	114	50
SCHENECTADY N Y	57												
NUMBER OF SAMPLES		1	2	3	2	2	1	2	2	2	2	2	1
MAXIMUM		48	82	51	26	53	42	36	35	54	236	57	37
AVERAGE		48	57	36	25	50	42	32	27	44	132	52	37
MINIMUM		48	33	25	25	47	42	28	19	35	29	47	37
SYRACUSE N Y	57												
NUMBER OF SAMPLES		2	3	2	1	3	1	3	2	2	2	3	2
MAXIMUM		38	118	137	47	93	109	96	86	71	112	283	137
AVERAGE		34	67	101	47	72	109	62	74	69	90	130	92
MINIMUM		30	38	65	47	47	109	46	63	68	68	44	48
UTICA N Y	57												
NUMBER OF SAMPLES		2	2	2	2	2	1	3	1	3	2	2	2
MAXIMUM		102	139	84	91	36	44	50	83	120	112	125	69
AVERAGE		80	95	70	71	31	44	40	83	72	69	80	55
MINIMUM		58	51	56	52	26	44	34	83	48	26	35	42
PHILADELPHIA PA	55 57												
NUMBER OF SAMPLES		51	61	66	61	78	66	99	79	89	77	93	76
MAXIMUM		730	721	400	829	522	281	383	303	343	340	616	738
AVERAGE		174	185	161	177	145	133	106	111	125	137	180	220
MINIMUM		43	32	48	34	48	53	23	34	24	16	42	44
ALTOONA PA	55 56												
NUMBER OF SAMPLES			1	1	2	3	3		3	3	5	3	3
MAXIMUM			173	230	74	188	50		110	89	490	200	179
AVERAGE			173	230	63	139	40		63	74	171	142	142
MINIMUM			173	230	52	98	35		40	63	50	83	112

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
BRISTOL PA	55 56												
NUMBER OF SAMPLES			3	3	3	3		4	3	4	4	3	4
MAXIMUM			71	224	55	70		109	90	101	71	128	158
AVERAGE			59	106	37	50		65	56	76	38	92	89
MINIMUM			53	35	18	36		40	25	52	7	49	16
CHESTER PA	55 56												
NUMBER OF SAMPLES			4	1	4	4		4	4	4	3	2	4
MAXIMUM			209	73	92	100		130	94	110	120	350	183
AVERAGE			124	73	53	68		79	68	71	60	278	93
MINIMUM			60	73	24	23		51	43	34	40	207	53
ERIE PA	55 56												
NUMBER OF SAMPLES		4	5	3	4	4	4	4	4	4	5	3	5
MAXIMUM		86	106	84	85	54	73	43	48	62	66	49	90
AVERAGE		69	63	74	55	47	48	35	30	39	33	37	39
MINIMUM		60	33	64	41	41	24	31	24	15	8	20	20
PITTSBURGH PA	55 57												
NUMBER OF SAMPLES		4	6	5	6	6	7	19	16	6	7	6	6
MAXIMUM		100	147	200	309	224	239	98	223	230	361	322	186
AVERAGE		75	121	136	147	146	140	61	124	113	134	128	98
MINIMUM		44	63	72	47	94	21	10	69	41	32	26	55
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	4	3	4	4	4	5	4	5	7	3
MAXIMUM			240	143	209	197	190	187	154	140	313	414	310
AVERAGE			173	140	153	128	128	122	118	128	221	236	215
MINIMUM			58	133	117	87	99	44	97	114	107	74	141
ALLENTOWN PA	57												
NUMBER OF SAMPLES				1	1	2	2	2	3	1	3	1	3
MAXIMUM				72	65	68	87	65	97	42	76	42	87
AVERAGE				72	65	56	69	64	77	42	41	42	60
MINIMUM				72	65	45	51	63	56	42	21	42	45
JOHNSTOWN PA	57												
NUMBER OF SAMPLES					1	1	3	1	2	1	1	1	
MAXIMUM					235	106	69	73	160	147	198	73	
AVERAGE					235	106	44	73	106	147	198	73	
MINIMUM					235	106	18	73	53	147	198	73	
LANCASTER PA	57												
NUMBER OF SAMPLES					1	1	2	2	2	2	1		
MAXIMUM					233	77	70	62	72	43	89		
AVERAGE					233	77	69	60	69	43	89		
MINIMUM					233	77	69	59	66	43	89		
SCRANTON PA	57												
NUMBER OF SAMPLES		2	2	3	2	2	2	2	2	2	3	2	2
MAXIMUM		52	295	163	45	118	123	58	114	81	301	223	248
AVERAGE		42	221	99	41	87	86	41	78	78	222	219	224
MINIMUM		32	147	63	37	56	49	24	43	75	78	216	200
WASHINGTON DC	55 57												
NUMBER OF SAMPLES		5	5	6	6	7	6	8	12	8	10	8	6
MAXIMUM		189	365	210	550	169	229	157	140	148	365	233	193
AVERAGE		113	184	110	155	70	103	88	62	111	172	161	144
MINIMUM		40	87	46	31	31	9	28	19	50	35	36	47
LOUISVILLE KY	55 57												
NUMBER OF SAMPLES		6	5	4	3	3	3	8	12	14	5	7	7
MAXIMUM		160	198	95	132	268	100	105	276	229	529	706	175
AVERAGE		122	125	76	91	138	78	78	99	103	206	340	105
MINIMUM		90	58	67	57	48	67	55	30	29	15	170	44
BALTIMORE MD	56 57												
NUMBER OF SAMPLES		2	2	2	3	2	6	5	8	6	5	7	5
MAXIMUM		208	103	140	336	124	202	160	177	146	545	375	952
AVERAGE		157	102	113	177	74	97	116	102	119	235	217	410
MINIMUM		106	102	87	65	25	52	86	51	85	86	115	104
CHARLOTTE NC	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	2	2	1	2	3
MAXIMUM		170	158	128	121	53	42	72	49	255	170	109	531
AVERAGE		166	117	124	118	50	32	61	46	152	170	105	384
MINIMUM		163	76	120	116	47	23	51	43	49	170	101	222
WINSTON SALEM NC	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	3	1	3	2	2
MAXIMUM		217	298	144	55	59	37	52	67	20	70	167	138
AVERAGE		185	173	124	52	52	37	52	48	20	50	112	127
MINIMUM		153	49	105	50	45	37	52	22	20	12	57	116
SAN JUAN PUERTO RICO	57												
NUMBER OF SAMPLES		3	1	2	1		2	2	2	2	3	2	1
MAXIMUM		62	27	63	52		118	42	68	69	49	49	16
AVERAGE		57	27	42	52		85	29	68	56	32	41	16
MINIMUM		50	27	21	52		53	17	68	44	16	34	16
NORFOLK VA	57												
NUMBER OF SAMPLES		2	2	3	1	2	2	3	2	2	1	3	2
MAXIMUM		148	145	98	84	115	38	63	84	144	90	74	163
AVERAGE		146	125	71	84	83	35	52	69	106	90	63	139
MINIMUM		145	106	55	84	51	33	34	55	68	90	57	116

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
RICHMOND VA	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	3	1	3
MAXIMUM		115	198	140	80	47	37	45	45	53	139	58	150
AVERAGE		103	168	130	67	45	31	41	36	53	96	58	128
MINIMUM		92	139	120	56	43	25	37	28	53	75	58	107
CHARLESTON W VA	55 57												
NUMBER OF SAMPLES		4	4	1	3	6	4	8	8	8	7	5	5
MAXIMUM		308	366	38	122	138	227	128	119	196	213	261	367
AVERAGE		162	165	38	81	91	133	81	83	111	115	91	171
MINIMUM		52	39	38	24	57	50	25	42	46	26	27	49
WHEELING W VA	56 57												
NUMBER OF SAMPLES		2	2	2	3	1	2	6	4	4	5	3	2
MAXIMUM		437	342	218	208	99	103	113	124	100	300	215	405
AVERAGE		282	269	150	191	99	97	85	87	74	195	176	270
MINIMUM		127	196	82	168	99	91	69	53	45	102	107	136
BIRMINGHAM ALA	57												
NUMBER OF SAMPLES		2	3	1	2	3	2	2	1	2	3	2	2
MAXIMUM		112	155	85	79	214	72	98	108	96	208	100	134
AVERAGE		106	96	85	60	89	50	97	108	68	112	99	112
MINIMUM		101	64	85	42	9	28	96	108	40	61	99	90
TAMPA FLA	55 57												
NUMBER OF SAMPLES		6	5	5	5	7	6	10	10	9	10	7	6
MAXIMUM		152	205	95	81	124	122	83	99	124	108	247	192
AVERAGE		77	120	67	58	76	73	57	64	64	63	134	79
MINIMUM		40	70	44	44	47	32	37	9	7	37	51	
MIAMI FLA	57												
NUMBER OF SAMPLES		2	2	1	2	3	1	3	2	2	2	3	2
MAXIMUM		98	62	111	53	47	31	74	33	49	80	93	79
AVERAGE		96	61	111	45	39	31	48	32	44	71	53	56
MINIMUM		94	61	111	38	31	31	31	31	40	63	31	33
ATLANTA GA	55 57												
NUMBER OF SAMPLES		6	6	5	6	5	5	14	14	8	9	4	7
MAXIMUM		354	311	525	105	137	142	298	136	169	803	185	385
AVERAGE		145	155	197	80	93	106	106	98	98	249	121	165
MINIMUM		81	58	60	63	55	80	57	41	62	75	84	80
COLUMBUS GA	57												
NUMBER OF SAMPLES		3	2	3	1	3	2	2	2	2	3	2	2
MAXIMUM		60	151	92	108	82	40	69	80	59	177	114	221
AVERAGE		47	140	73	108	52	39	54	75	50	123	97	133
MINIMUM		41	129	43	108	35	39	39	70	42	36	81	45
JACKSON MISS	57												
NUMBER OF SAMPLES		2	2	2	2	2	1	3	3	1	3	2	1
MAXIMUM		45	18	220	19	106	18	69	99	40	69	67	38
AVERAGE		40	13	198	14	57	18	48	59	40	40	47	38
MINIMUM		35	8	177	9	8	18	32	30	40	14	27	38
COLUMBIA SC	57												
NUMBER OF SAMPLES		2	2	2	1	2	3	2	3	1	2	3	1
MAXIMUM		211	274	350	55	59	79	60	107	51	227	196	185
AVERAGE		140	184	257	55	41	51	51	88	51	139	149	185
MINIMUM		69	94	164	55	24	33	43	52	51	51	65	185
GREENVILLE SC	57												
NUMBER OF SAMPLES		2	2	2	2	4	3	3	2	3	2	2	2
MAXIMUM		149	290	77	246	95	103	41	106	152	248	292	111
AVERAGE		113	232	62	146	73	61	34	78	114	170	243	93
MINIMUM		77	175	48	47	49	38	31	50	60	93	195	75
CHATTANOOGA TENN	55 57												
NUMBER OF SAMPLES		6	5	15	10	6	4	15	15	17	9	9	7
MAXIMUM		204	597	540	367	227	173	160	334	245	497	478	733
AVERAGE		134	259	175	142	115	111	85	112	117	200	191	308
MINIMUM		65	113	37	29	45	60	9	31	29	57	67	56
KNOXVILLE TENN	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	2	2	3	1	2	3
MAXIMUM		194	213	126	209	74	74	68	136	140	180	186	337
AVERAGE		163	184	116	115	74	63	60	103	107	180	173	266
MINIMUM		132	155	106	52	74	54	53	71	75	180	160	129
NASHVILLE TENN	57												
NUMBER OF SAMPLES		4	2	2	2	3	2	2	2	3	2	2	2
MAXIMUM		197	86	87	198	72	126	84	173	91	560	78	59
AVERAGE		137	74	85	126	47	94	69	144	74	322	72	55
MINIMUM		112	63	84	54	35	63	54	115	54	84	67	51
CHICAGO ILL	55 57												
NUMBER OF SAMPLES		12	15	3	4	6	1	13	22	17	19	22	14
MAXIMUM		324	403	65	575	237	54	256	241	288	328	500	480
AVERAGE		175	243	58	229	122	54	103	114	106	180	173	270
MINIMUM		21	31	52	76	75	54	8	20	24	46	54	108
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		8	7	8	8	9	6	8	14	8	8	7	8
MAXIMUM		267	414	293	341	191	151	166	252	333	618	428	381
AVERAGE		169	144	131	122	81	80	92	133	156	234	214	188
MINIMUM		70	52	21	38	25	21	41	43	60	33	88	26

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SPRINGFIELD ILL	57												
NUMBER OF SAMPLES				2	3	2	1	3	1	2	2	1	3
MAXIMUM				160	83	35	32	108	72	71	115	212	125
AVERAGE				103	59	33	32	79	72	61	74	212	63
MINIMUM				47	38	32	32	64	72	51	34	212	19
EAST CHICAGO IND	55 57												
NUMBER OF SAMPLES		7	14	20	13	20	6	21	13	19	25	20	15
MAXIMUM		216	223	448	363	190	154	227	313	293	490	249	339
AVERAGE		137	124	173	177	85	96	84	132	154	185	123	131
MINIMUM		63	32	59	59	26	54	29	65	49	53	39	28
EVANSVILLE IND	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	2	2	1	3
MAXIMUM		87	98	74	77	53	58	43	47	84	54	19	190
AVERAGE		67	87	57	77	40	40	42	43	62	53	19	103
MINIMUM		48	77	39	77	31	23	42	40	40	53	19	34
FORT WAYNE IND	57												
NUMBER OF SAMPLES		2	3	2	2	2	2	3	1	2	4	3	2
MAXIMUM		145	247	90	130	57	43	56	70	107	282	93	113
AVERAGE		120	173	80	97	57	38	50	70	69	201	63	108
MINIMUM		96	87	71	64	57	34	42	70	32	127	33	103
INDIANAPOLIS IND	57												
NUMBER OF SAMPLES		1	2	1	2	3	2	2	3	2	4	2	2
MAXIMUM		181	84	120	161	133	99	74	183	155	178	102	348
AVERAGE		181	84	120	138	108	80	49	148	100	138	90	207
MINIMUM		181	84	120	115	72	61	25	87	46	101	78	67
DETROIT MICH	56 57												
NUMBER OF SAMPLES		1	2	9	11	12	11	4	9	10	6	7	4
MAXIMUM		86	175	171	118	114	211	111	114	165	417	195	132
AVERAGE		86	141	92	73	69	117	82	76	86	210	84	113
MINIMUM		86	107	26	26	13	27	43	28	27	25	15	82
GRAND RAPIDS MICH	57												
NUMBER OF SAMPLES		2	2	2	2	2	3		3	1	1		
MAXIMUM		108	154	73	73	153	136		63	221	153		
AVERAGE		85	128	67	69	110	80		57	221	153		
MINIMUM		63	103	62	66	68	52		51	221	153		
KALAMAZOO MICH	57												
NUMBER OF SAMPLES		2	3	1	3	2	2	2	2	2	1	3	2
MAXIMUM		52	76	30	38	35	27	29	65	86	29	60	101
AVERAGE		43	63	30	27	33	21	23	41	68	29	48	85
MINIMUM		35	38	30	7	32	15	17	17	50	29	38	69
LANSING MICH	57												
NUMBER OF SAMPLES		2	2	1	4	3	2	2	3	1	2	2	2
MAXIMUM		61	92	66	75	34	67	60	101	36	52	63	64
AVERAGE		48	62	66	68	31	50	59	61	36	44	55	54
MINIMUM		35	32	66	50	25	34	58	33	36	36	47	44
FLINT MICH	57												
NUMBER OF SAMPLES		2	3	1	3	1	2	3	2	2	3	2	2
MAXIMUM		82	190	62	83	141	132	87	79	108	200	108	46
AVERAGE		77	126	62	73	141	93	69	57	100	116	84	41
MINIMUM		73	63	62	61	141	54	59	35	92	70	61	37
CINCINNATI OHIO	55 57												
NUMBER OF SAMPLES		6	5	7	6	6	5	10	10	11	7	7	11
MAXIMUM		292	194	299	108	213	319	190	208	545	235	175	233
AVERAGE		140	119	141	75	85	127	80	102	136	150	109	149
MINIMUM		47	35	47	46	22	26	33	21	24	84	59	85
YOUNGSTOWN OHIO	56 57												
NUMBER OF SAMPLES		2	2	2	3	2	1	7	8	8	2	5	4
MAXIMUM		137	180	125	173	89	52	145	180	276	423	490	206
AVERAGE		111	157	91	103	77	52	81	126	170	350	244	104
MINIMUM		85	134	58	35	65	52	45	55	36	277	82	46
CANTON OHIO	57												
NUMBER OF SAMPLES		2	2	2	2	3	1	3	3	1	2	2	3
MAXIMUM		183	270	220	173	314	49	125	131	132	265	242	158
AVERAGE		144	192	215	125	176	49	99	105	132	210	193	97
MINIMUM		106	115	211	77	97	49	66	85	132	156	145	59
CLEVELAND OHIO	57												
NUMBER OF SAMPLES		2	3	2	1	3	2	2	2	2	2	3	2
MAXIMUM		175	248	62	150	89	111	109	291	90	141	187	159
AVERAGE		124	166	56	150	75	74	93	218	81	99	157	133
MINIMUM		73	119	50	150	66	38	78	146	73	57	106	108
COLUMBUS OHIO	57												
NUMBER OF SAMPLES		2	2	3	2	2	2	2	2	3	4	3	2
MAXIMUM		167	116	120	101	62	123	61	97	123	193	307	110
AVERAGE		166	115	81	70	51	89	56	86	111	129	198	108
MINIMUM		166	115	40	40	40	56	52	76	95	26	70	107
TOLEDO OHIO	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	3	2	2	2
MAXIMUM		64	250	54	77	54	65	132	52	234	184	61	160
AVERAGE		48	167	49	61	46	58	88	47	125	130	53	99
MINIMUM		32	84	44	38	38	52	45	42	39	76	45	38

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LORAIN OHIO	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	2	2	3	2	2
MAXIMUM		192	172	57	94	53	64	80	121	62	206	109	533
AVERAGE		146	157	49	89	51	54	62	87	47	133	79	317
MINIMUM		100	142	41	84	50	40	44	54	32	91	49	101
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	3	2	2
MAXIMUM		104	170	76	129	28	42	61	62	134	86	85	97
AVERAGE		83	118	62	107	18	42	53	53	124	63	67	96
MINIMUM		62	67	46	66	9	42	45	44	114	50	49	95
RACINE WIS	57												
NUMBER OF SAMPLES		2	1	3	2	2	2	2	2	1	2	2	2
MAXIMUM		77	64	102	81	71	60	72	67	76	70	212	95
AVERAGE		53	64	74	62	43	46	49	52	76	65	152	68
MINIMUM		29	64	53	43	15	33	26	38	76	61	92	42
DES MOINES IOWA	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	2	2	2	2	2	3
MAXIMUM		176	159	88	83	95	183	41	97	47	34	66	106
AVERAGE		118	140	80	69	62	120	40	64	40	20	57	68
MINIMUM		60	121	73	55	46	58	39	32	33	6	48	49
KANSAS CITY KANSAS	55 57												
NUMBER OF SAMPLES			3	6	5	6	5	7	5	5	1		
MAXIMUM			152	170	149	82	82	146	231	285	52		
AVERAGE			111	72	68	54	44	81	117	93	52		
MINIMUM			44	41	33	33	20	33	43	30	52		
WICHITA KANSAS	57												
NUMBER OF SAMPLES		2	3	1	3	1	3	3	2	1	2	3	2
MAXIMUM		40	61	25	31	41	47	41	45	47	52	37	50
AVERAGE		32	44	25	30	41	34	37	40	47	46	30	45
MINIMUM		24	32	25	29	41	25	35	36	47	40	18	40
MINNEAPOLIS MINN	55 57												
NUMBER OF SAMPLES		6	6	6	6	7	7	11	10	14	12	8	8
MAXIMUM		160	157	90	446	173	100	127	171	218	397	117	250
AVERAGE		94	116	65	114	95	64	62	75	84	138	72	109
MINIMUM		65	87	26	35	55	18	9	25	30	28	23	46
DULUTH MINN	57												
NUMBER OF SAMPLES		1	2	3	1	3	2	2	2	2	3	2	2
MAXIMUM		63	70	280	46	79	38	69	132	63	107	65	138
AVERAGE		63	63	148	46	65	29	59	91	51	84	52	92
MINIMUM		63	57	75	46	57	20	50	50	40	65	40	47
KANSAS CITY MO	55 57												
NUMBER OF SAMPLES		6	8	10	8	11	5	11	14	11	11	9	4
MAXIMUM		497	301	161	315	115	231	119	200	300	369	199	298
AVERAGE		206	123	90	132	74	104	60	99	93	121	108	159
MINIMUM		68	26	27	28	25	32	15	15	15	23	54	69
ST LOUIS MO	55 57												
NUMBER OF SAMPLES		10	11	10	10	12	10	18	22	19	16	13	9
MAXIMUM		454	491	196	141	189	146	259	198	305	745	358	503
AVERAGE		239	312	135	94	112	109	126	127	177	254	172	264
MINIMUM		114	103	60	76	28	41	22	46	59	67	89	116
BRENTWOOD MO	55 56												
NUMBER OF SAMPLES		2		4	4	2		2	4	5	3	4	2
MAXIMUM		85		109	56	103		102	82	203	257	437	137
AVERAGE		75		75	33	69		90	50	104	199	158	117
MINIMUM		65		25	15	35		79	22	7	105	38	98
BRECKENRIDGE MO	55 56												
NUMBER OF SAMPLES		4	3	2	4	2			1	4	2	3	1
MAXIMUM		172	540	215	121	126			93	344	578	338	179
AVERAGE		120	275	149	70	92			93	149	346	142	179
MINIMUM		65	89	83	36	58			93	50	115	42	179
OMAHA NEB	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	2	3	2
MAXIMUM		63	49	94	40	62	49	84	49	72	121	96	158
AVERAGE		60	41	67	34	47	48	62	49	64	110	81	154
MINIMUM		57	34	40	31	33	48	41	49	57	100	58	150
LINCOLN NEB	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	3	1	3
MAXIMUM		43	50	49	100	62	48	44	48	86	45	67	175
AVERAGE		41	46	48	75	47	43	40	47	79	34	67	100
MINIMUM		39	43	48	56	32	38	36	47	72	24	67	51
BISMARCK ND	57												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	3	1	3	2	1
MAXIMUM		27	70	60	42	27	34	41	44	35	90	56	36
AVERAGE		22	57	38	39	22	29	33	31	35	60	51	36
MINIMUM		17	44	17	36	17	25	26	17	35	35	47	36
SIOUX FALLS SD	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	2	3	2	2
MAXIMUM		51	67	60	50	33	43	25	48	57	75	54	41
AVERAGE		37	59	42	33	29	34	15	46	43	45	42	35
MINIMUM		23	51	24	17	26	26	5	44	29	21	31	30

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LITTLE ROCK ARK	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	3	2	2	2	2
MAXIMUM		97	40	141	48	29	51	51	86	174	136	30	87
AVERAGE		68	32	86	44	28	50	40	52	112	108	28	64
MINIMUM		39	24	32	39	28	50	29	29	50	80	27	41
NEW ORLEANS LA	55 57												
NUMBER OF SAMPLES		11	10	12	9	9	3	8	7	12	10	10	10
MAXIMUM		296	416	558	207	138	73	109	100	228	295	194	107
AVERAGE		102	150	112	75	58	52	68	64	108	146	73	76
MINIMUM		40	37	24	24	16	40	21	27	21	84	38	26
BATON ROUGE LA	57												
NUMBER OF SAMPLES			3	2	2	2	2	2	3	1	3	2	2
MAXIMUM			112	176	103	126	105	137	143	109	270	251	315
AVERAGE			95	132	83	120	99	97	119	109	207	153	175
MINIMUM			86	88	63	114	93	58	74	109	105	56	35
ALBUQUERQUE NM	57												
NUMBER OF SAMPLES		2	2	3		2	2	2	1	2	2	2	2
MAXIMUM		315	287	180		98	90	217	97	125	241	385	410
AVERAGE		293	225	114		91	87	186	97	99	216	289	280
MINIMUM		272	163	61		85	85	156	97	74	192	193	151
TULSA OKLA	57												
NUMBER OF SAMPLES		3		2	1	2	1		3	1	2	3	2
MAXIMUM		44		24	25	25	8		42	67	24	28	41
AVERAGE		32		20	25	16	8		26	67	21	27	33
MINIMUM		22		16	25	8	8		17	67	18	25	26
FT WORTH TEXAS	55 56												
NUMBER OF SAMPLES		4	4	4	4	5	4	8	9	8	10	7	4
MAXIMUM		156	234	298	186	63	57	63	100	132	327	133	154
AVERAGE		119	111	118	78	45	39	49	64	86	109	83	101
MINIMUM		86	55	39	32	30	30	41	21	50	32	47	82
HOUSTON TEXAS	55 57												
NUMBER OF SAMPLES		5	6	6	5	3	4	11	8	11	11	11	11
MAXIMUM		124	141	119	122	58	58	100	151	223	405	214	276
AVERAGE		70	71	67	55	38	39	50	70	122	144	80	117
MINIMUM		36	39	42	38	27	28	21	12	26	57	20	63
BELLAIRE TEXAS	55 56												
NUMBER OF SAMPLES		3	1	3				2	4	2	3	2	3
MAXIMUM		222	45	156				51	89	56	97	143	60
AVERAGE		154	45	78				33	59	48	74	89	59
MINIMUM		72	45	39				16	41	40	57	35	59
DALLAS TEXAS	57												
NUMBER OF SAMPLES		2	2	3	1	3	2	2	2	2	2	3	1
MAXIMUM		58	107	122	137	81	84	58	38	65	89	147	97
AVERAGE		49	75	89	137	49	64	57	37	53	54	111	97
MINIMUM		41	43	51	137	17	45	57	37	42	19	58	97
SAN ANTONIO TEXAS	57												
NUMBER OF SAMPLES		2	3	1	3	2	2	2	2	2	3	2	2
MAXIMUM		32	77	43	66	49	79	47	45	32	76	46	76
AVERAGE		28	60	43	45	35	47	34	33	27	57	34	59
MINIMUM		24	32	43	25	22	16	21	22	23	23	23	43
EL PASO TEXAS	57												
NUMBER OF SAMPLES		3	2	2	2	2	2	4	2	3	2	2	2
MAXIMUM		187	57	39	70	42	41	65	58	140	129	118	173
AVERAGE		125	43	28	63	35	29	53	51	98	89	68	130
MINIMUM		72	29	18	56	29	17	38	45	35	50	18	88
CORPUS CHRISTI TEXAS	57												
NUMBER OF SAMPLES		2	2	2	3	2	2	2	2	3	1	2	3
MAXIMUM		22	15	31	25	77	29	28	43	48	49	60	36
AVERAGE		18	14	27	21	46	27	23	30	35	49	42	34
MINIMUM		15	14	23	16	15	26	19	18	25	49	24	30
DENVER COL	55 57												
NUMBER OF SAMPLES		7	6	6	7	7	7	11	8	10	8	7	8
MAXIMUM		385	209	209	183	127	146	195	180	181	272	339	424
AVERAGE		221	127	127	75	75	87	103	101	128	137	140	262
MINIMUM		79	65	47	26	27	53	59	17	70	86	49	47
BOISE IDAHO	57												
NUMBER OF SAMPLES		7	4	4	2	3	2	2	3	2	2	2	1
MAXIMUM		130	109	175	80	57	41	46	64	142	119	237	56
AVERAGE		104	80	127	66	48	33	39	52	91	118	197	56
MINIMUM		81	51	80	53	40	25	32	41	41	118	158	56
HELENA MONTANA	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	2	3	1	3
MAXIMUM		25	32	23	24	17	28	42	18	29	35	18	41
AVERAGE		22	32	23	20	11	18	25	17	28	25	18	20
MINIMUM		20	32	23	17	8	8	9	17	27	15	18	
SALT LAKE CITY UTAH	55 57												
NUMBER OF SAMPLES		6	4	2	4	10	5	10	12	6	6	4	6
MAXIMUM		467	255	32	104	192	101	112	153	225	177	315	370
AVERAGE		247	145	69	74	72	75	67	82	143	121	212	229
MINIMUM		74	100	57	58	39	45	29	40	77	82	75	149

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER— URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
CHEYENNE WYO	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	3	2	2	2	2	3
MAXIMUM		83	96	89	44	8	29	47	56	91	54	51	43
AVERAGE		58	70	52	33	8	21	34	47	74	41	35	36
MINIMUM		34	44	16	24	8	9	27	38	57	28	20	31
ANCHORAGE ALASKA	55 57												
NUMBER OF SAMPLES		1	3	2	2	3	3	7	3	6	2	8	2
MAXIMUM		127	150	49	153	74	80	135	132	168	109	532	312
AVERAGE		127	100	48	151	55	76	79	119	133	98	223	191
MINIMUM		127	40	47	150	43	72	35	96	96	87	57	71
PHOENIX ARIZ	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	2	2	2	3	2	2
MAXIMUM		314	242	86	86	120	59	106	77	212	177	303	587
AVERAGE		299	197	66	76	93	48	98	61	140	140	300	495
MINIMUM		285	153	47	66	75	37	91	46	69	82	297	404
LOS ANGELES CALIF	57												
NUMBER OF SAMPLES		2	2	3	2	2	2	2	2	1	2	3	1
MAXIMUM		249	477	561	490	150	183	106	229	233	389	533	525
AVERAGE		210	458	291	317	94	151	71	179	233	315	345	525
MINIMUM		171	440	90	145	39	119	36	130	233	242	116	525
SAN FRANCISCO CALIF	55 57												
NUMBER OF SAMPLES		6	5	6	5	9	7	8	5	8	5	6	4
MAXIMUM		119	108	42	182	86	101	39	70	66	131	166	335
AVERAGE		80	53	28	63	26	50	26	44	36	59	63	150
MINIMUM		54	24	15	17	9	9	9	17	18	8	19	40
PASADENA CALIF	55 57												
NUMBER OF SAMPLES		6	6	10	9	12	3	8	8	7	7	5	3
MAXIMUM		712	543	276	771	430	233	270	284	316	252	345	368
AVERAGE		343	247	206	201	163	198	177	209	205	153	224	243
MINIMUM		132	111	49	9	65	142	80	117	83	76	85	92
SAN JOSE CALIF	55 57												
NUMBER OF SAMPLES		7	6	6	6	7	6	9	12	10	9	8	6
MAXIMUM		203	180	100	62	78	111	108	131	195	298	253	216
AVERAGE		102	99	68	42	55	62	42	78	120	133	136	89
MINIMUM		30	37	37	25	17	26	22	44	34	35	68	17
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		5	3	4	4	5	3	11	21	17	13	13	4
MAXIMUM		536	183	172	147	162	237	269	331	631	439	490	111
AVERAGE		176	115	132	89	104	153	115	129	179	159	225	78
MINIMUM		47	51	79	28	60	103	80	70	56	68	90	50
SAN DIEGO CALIF	57												
NUMBER OF SAMPLES		2	2	2	2	3	1	3	3	1	2	3	2
MAXIMUM		239	84	136	64	44	30	71	74	107	145	242	464
AVERAGE		187	71	97	48	35	30	47	62	107	98	182	328
MINIMUM		135	58	59	32	30	30	23	50	107	52	90	192
BURBANK CALIF	57												
NUMBER OF SAMPLES		2	2	3	2	2	2	2	3	1	2	4	1
MAXIMUM		570	300	275	234	91	71	113	297	103	274	362	607
AVERAGE		306	196	153	161	70	58	84	267	103	223	277	607
MINIMUM		42	92	55	88	50	46	56	245	103	173	96	607
SAN BERNARDINO CALIF	57												
NUMBER OF SAMPLES		1	2	2	2	2	3	5	1	1	1	2	1
MAXIMUM		32	340	86	57	105	170	187	112	459	231	790	167
AVERAGE		32	250	74	53	97	140	177	112	459	231	622	167
MINIMUM		32	160	62	49	89	100	162	112	459	231	455	167
HONOLULU HAWAII	56 57												
NUMBER OF SAMPLES		2	2	2	3	8	11	7	8	5	4	6	4
MAXIMUM		26	67	60	63	93	66	36	54	53	61	107	87
AVERAGE		25	61	48	39	51	32	23	29	40	46	63	43
MINIMUM		25	56	37	27	21	15	8	15	22	38	24	27
LAS VEGAS NEVADA	57												
NUMBER OF SAMPLES		1	1	2	4	2	3	2	2	3	2	2	2
MAXIMUM		108	132	122	60	39	69	72	84	99	101	156	167
AVERAGE		108	132	80	50	35	58	48	65	79	93	102	140
MINIMUM		108	132	39	34	32	52	25	47	62	86	49	114
PORTLAND OREGON	55 57												
NUMBER OF SAMPLES		6	6	13	7	3	3	13	46	23	8	3	6
MAXIMUM		187	180	400	104	219	86	124	140	253	438	243	206
AVERAGE		117	79	109	66	98	56	79	71	111	256	114	119
MINIMUM		72	35	35	32	8	41	35	25	42	69	13	28
SEATTLE WASH	57												
NUMBER OF SAMPLES		3	2	1	2	3	2	2	2	3	2	1	2
MAXIMUM		214	95	137	32	145	66	108	95	232	176	39	125
AVERAGE		166	79	137	24	97	45	87	68	129	171	39	89
MINIMUM		132	63	137	16	66	25	66	41	69	167	39	54

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	55 56												
NUMBER OF SAMPLES		4	5	4	4	5	4	9	9	8	9	5	4
MAXIMUM		77	65	71	50	47	46	66	70	120	200	98	27
AVERAGE		45	43	57	31	37	38	36	47	71	95	68	22
MINIMUM		21	21	43	20	29	34	17	9	18	60	27	17
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		3	4	3	4	3		4	2	4	1	3	3
MAXIMUM		56	124	33	61	49		33	36	43	19	96	116
AVERAGE		41	66	32	43	35		30	35	36	19	45	63
MINIMUM		32	25	31	25	24		25	34	25	19	20	32
KANAWHA CO W VA	55 56												
NUMBER OF SAMPLES		2	2		1	2		3	2	3	3	3	3
MAXIMUM		187	158		46	49		83	91	87	59	106	162
AVERAGE		111	107		46	47		72	70	55	55	52	81
MINIMUM		36	57		46	46		53	50	35	53	25	36
HILLSBOROUGH CO FLA	55 56												
NUMBER OF SAMPLES		3	1	4	2	4		5	7	6	6	4	2
MAXIMUM		32	61	80	50	39		43	56	49	57	111	79
AVERAGE		27	61	55	30	27		26	31	32	32	55	49
MINIMUM		20	61	30	10	19		16	13	13	19	30	19
DENVER COUNTY COLO	55 56												
NUMBER OF SAMPLES		5	3	5	4	5	4	8	3	4	3	2	4
MAXIMUM		158	81	95	46	58	73	72	35	29	42	77	71
AVERAGE		75	54	63	31	42	62	31	29	19	27	73	45
MINIMUM		29	36	23	23	22	47	9	18	10	19	70	11

TABLE 3. BENZENE SOLUBLE ORGANIC MATTER—NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) $\times 10^{-1}$

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LITCHFIELD CNTY CONN	55 56												
NUMBER OF SAMPLES		3	3	5	5	3	4	5	5	1		1	5
MAXIMUM		24	96	41	27	18	33	34	18	16		32	25
AVERAGE		16	47	28	15	9	22	23	15	16		32	19
MINIMUM		8	16	16	8	1	16	15	8	16		32	8
ACADIA NATNL PARK ME	57												
NUMBER OF SAMPLES					2	2	1	3	2	2	1	3	2
MAXIMUM					31	19	21	28	19	19	20	39	20
AVERAGE					20	14	21	19	14	19	20	26	19
MINIMUM					9	10	21	12	10	19	20	20	18
WORCESTER COUNTY MD	57												
NUMBER OF SAMPLES								5	4	4	3	5	3
MAXIMUM								68	80	81	102	159	88
AVERAGE								51	64	59	78	93	57
MINIMUM								33	53	46	55	31	23
SHENANDOAH PARK VA	57												
NUMBER OF SAMPLES						3	4	3	3	3	3	4	2
MAXIMUM						25	17	17	61	17	18	25	34
AVERAGE						18	16	14	36	13	11	12	21
MINIMUM						15	16	9	9	8	8		8
HOLLY RIVER PK W VA	57												
NUMBER OF SAMPLES						2	3	4	4	4	3	3	2
MAXIMUM						19	25	26	26	17	16	23	23
AVERAGE						17	22	20	21	14	10	18	19
MINIMUM						16	16	8	17	9	8	16	16
FLORIDA KEYS FLORIDA	57												
NUMBER OF SAMPLES									1	4	3	3	3
MAXIMUM									24	30	17	17	25
AVERAGE									24	19	8	8	19
MINIMUM									24	16			17
OATLAND ISLAND GA	57												
NUMBER OF SAMPLES						2	2	2	2	1	3	2	2
MAXIMUM						52	55	32	31	31	158	26	20
AVERAGE						50	48	28	26	31	67	22	15
MINIMUM						49	42	25	21	31	17	19	10
JACKSON COUNTY MISS	57												
NUMBER OF SAMPLES									4	3	5	3	5
MAXIMUM									30	23	32	23	32
AVERAGE									24	18	23	17	16
MINIMUM									17	15	16	15	8
FT DONELSON TENN	57												
NUMBER OF SAMPLES					1	2	2	3	2	2	2	2	1
MAXIMUM					24	14	15	22	22	34	22	48	23
AVERAGE					24	11	11	14	14	28	18	39	23
MINIMUM					24	8	8	8	7	23	15	31	23
SANGAMON COUNTY ILL	57												
NUMBER OF SAMPLES				1	2	1	2	2	2	2	1	2	1
MAXIMUM				16	24	24	27	25	41	31	73	58	28
AVERAGE				16	19	24	22	17	33	25	73	38	28
MINIMUM				16	15	24	17	9	26	19	73	19	28
HURON COUNTY MICH	57												
NUMBER OF SAMPLES			2	1		2	4	4	4	4	5	4	4
MAXIMUM			15	12		28	26	17	17	34	26	31	15
AVERAGE			15	12		18	17	14	14	14	14	18	12
MINIMUM			15	12		9	8	8	8			8	8
ELLIS COUNTY KANSAS	57												
NUMBER OF SAMPLES						1	1	2	2	1	2		2
MAXIMUM						8	6	25	26	6	9		15
AVERAGE						8	6	16	21	6	8		11
MINIMUM						8	6	8	17	6	8		7
COOK COUNTY MINN	57												
NUMBER OF SAMPLES				2	1	3	2	1	3	2		2	2
MAXIMUM				15	23	31	8	32	44	29		24	25
AVERAGE				15	23	21	8	32	25	26		19	16
MINIMUM				15	23	14	8	32	16	23		15	8
SHANNON COUNTY MO	57												
NUMBER OF SAMPLES									1	4	4	4	5
MAXIMUM									16	30	15	15	18
AVERAGE									16	13	9	5	13
MINIMUM									16		7		8
PT WORONZOF ALASKA	55 57												
NUMBER OF SAMPLES		3	3	5	4	4	4	5	4	4	5	7	7
MAXIMUM		124	57	55	10	9	9	34	39	28	54	135	90
AVERAGE		96	35	43	7	7	5	19	17	16	26	36	30
MINIMUM		67	20	22	4	4	4	9	4	6	7	7	
GRAND CANYON ARIZ	57												
NUMBER OF SAMPLES							2	3	3	4	5	4	5
MAXIMUM							19	9	9	84	8	9	19
AVERAGE							13	7	8	27	3	6	11
MINIMUM							8	5	8	8			8
WAIMANOLO HAWAII	57												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	2	1
MAXIMUM		24	8	16	49	32	16	40	24	24	18	43	9
AVERAGE		20	8	12	28	25	16	28	20	21	17	35	9
MINIMUM		17	8	9	8	19	16	16	17	18	16	28	9

TABLE 4. RADIOACTIVITY—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	5	1	48	15	1	1	6	6	9	9	15	15	54
	1	56	1	14	14	14					15	15	15	15	15
	1	55 56	6	1	48	15	1	1	6	6	9	14	14	15	15
HARTFORD CONN	1	57	21	5	490	50	6	13	14	15	26	30	33	39	68
NEW HAVEN CONN	1	57	23	9	169	36	10	11	15	18	23	33	37	40	54
STAMFORD CONN	1	57	20	1	304	62	9	11	14	17	20	30	54	88	145
PORTLAND MAINE	1	57	14	6	38	18	6	10	11	12	14	15	23	26	38
BOSTON MASS	1	55	16		156	11			1	1	1	2	2	4	4
	1	56	14	1	33	9	1	5	5	6	6	7	9	12	20
	1	57	18	1	99	27	9	11	12	14	18	22	25	26	69
	1	55 57	48		156	16	1	1	3	5	7	11	14	20	30
EVERETT MASS	1	55	4	7	588	154		7	7	11	11	11	12	12	642
	1	56	10		19	8	1	3	6	7	8	8	9	11	12
	1	55 56	14		588	49	1	6	7	8	8	9	11	11	20
LAWRENCE MASS	1	57	17	9	83	28	9	11	15	17	19	20	36	42	54
LYNN MASS	1	57	17	9	320	58	9	11	13	15	20	30	42	54	113
SOMERVILLE MASS	1	57	16	1	207	45	4	9	11	15	18	26	39	42	113
WORCESTER MASS	1	57	20	5	214	32	6	10	12	14	15	30	33	42	50
MANCHESTER N H	1	57	11	6	140	41	6	8	9	15	20	26	42	69	129
PROVIDENCE R I		55	14	1	14	4	1	2	2	3	3	4	4	5	6
		57	16	9	64	24	11	12	13	14	15	20	30	33	54
		55 57	32	1	64	15	2	3	4	6	12	13	14	26	42
BURLINGTON VT	1	57	16	5	188	28	7	10	10	11	14	18	23	26	42
WILMINGTON DEL	1	57	20	8	526	60	11	14	23	27	30	33	45	51	68
CAMDEN N J	1	57	17	7	230	41	12	14	16	18	19	20	39	54	69
JERSEY CITY N J	1	57	16	8	385	55	15	21	22	25	28	33	42	54	69
EAST ORANGE N J	1	57	12	9	740	126	8	9	15	20	30	33	48	69	501
NEWARK N J	1	57	9	10	54	26	12	17	18	20	23	23	26	33	48
NEW YORK N Y		53	5	1	2	1			1	1	1	1	2	2	2
		54	36		94	14	1	2	5	6	9	10	12	20	35
		55	37		29	6		1	1	2	3	5	8	12	20
		56	5	3	19	10	3	3	6	6	9	9	15	15	20
		57	17	5	183	40	6	9	20	28	31	33	48	62	69
		53 57	100		183	14		1	3	5	7	10	15	25	38
BINGHAMTON N Y	1	57	17	3	41	15	6	9	12	13	14	15	18	20	23
BUFFALO N Y	2	57	13	2	62	20	2	6	9	11	15	18	20	26	54
SCHENECTADY N Y	1	57	14	6	73	31	6	8	9	15	20	26	42	62	79
SYRACUSE N Y	1	57	16	4	115	38	6	7	8	12	20	42	59	64	68
UTICA N Y	1	57	16	8	268	38	8	9	11	12	14	18	20	42	54
PHILADELPHIA PA		53	14		13	3		1	1	1	2	3	4	6	15
		54	100		39	11	1	1	3	8	10	13	15	18	25
		55	129	1	912	25	1	3	4	6	8	10	11	14	23
		56	2	4	16	10			4	4	4	4	4	20	20
		57	14	13	223	42	15	20	22	25	26	28	31	33	54
		53 57	259		912	19	1	2	3	6	9	11	14	18	26
PITTSBURGH PA	1	57	17	7	930	102	11	12	17	20	33	42	62	113	145
ALLENTOWN PA	1	57	16	4	79	19	5	8	9	12	14	17	20	23	33
JOHNSTOWN PA	1	57	10	4	127	43	4	12	15	18	20	26	54	69	129
LANCASTER PA	1	57	10	9	468	100	9	18	20	26	33	38	42	54	391
SCRANTON PA	1	57	16	8	188	47	12	17	20	26	36	42	54	64	69
WASHINGTON DC		53	10	1	6	2		1	1	1	3	3	4	4	5
		54	33		39	8		1	1	2	4	5	8	11	26
		55	43	1	46	10	2	3	4	6	8	9	11	15	26
		56	34	6	93	26	7	14	17	21	23	25	30	35	54
		57	25	2	163	27	9	11	13	14	16	19	24	30	54
		53 57	145		163	16	1	3	5	7	10	14	19	25	36
LOUISVILLE KY		54	40	1	46	9	2	4	4	5	7	9	11	12	18
		55	20	1	50	7	1	2	3	4	5	6	7	9	12
		56	3	17	28	23		20	20	20	26	26	26	26	33
		57	11	16	728	140	18	20	33	42	62	69	88	145	391
		54 57	74	1	728	29	2	4	5	6	8	10	14	20	50
BALTIMORE MD	1	57	23	4	148	31	11	14	16	17	19	23	30	42	64
CHARLOTTE NC	1	57	17	11	234	42	11	12	15	18	23	26	42	54	69
WINSTON SALEM NC	1	57	17	6	109	28	9	12	14	17	20	22	25	30	33

TABLE 4. RADIOACTIVITY—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10'											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SAN JUAN PUERTO RICO	1	57	14	5	58	20	5	6	7	9	12	20	26	30	54
NORFOLK VA	1	57	16	3	115	33	7	12	16	18	20	26	30	54	69
RICHMOND VA	1	57	17	6	243	54	16	17	19	26	31	33	54	101	113
CHARLESTON W VA		53	6		3	2	1	1	1	1	2	3	3	3	3
		54	36		38	8	1	2	3	4	6	8	9	14	18
		55	6	4	34	15	4	4	10	10	11	12	12	20	20
		56	1								1	1	1	1	1
		57	15	8	323	45	8	9	15	20	24	26	38	42	69
		53 57	64		323	17	1	2	3	6	8	10	14	20	35
WHEELING W VA	1	57	15	7	826	82	15	16	19	20	26	28	33	42	113
BIRMINGHAM ALA	1	57	14	6	234	56	6	14	15	26	42	48	59	64	186
TAMPA FLA	1	53	5		2				1	1	1	1	1	1	2
	1	54	44		67	10		1	1	3	5	7	10	12	26
	1	55	39		130	20	1	2	3	4	6	11	15	23	54
	1	56	26	4	137	27	5	8	9	12	18	22	26	42	59
	1	57	23	3	658	113	3	14	17	20	25	33	69	113	464
	1	53 57	137		658	33	1	2	3	6	10	14	20	33	64
MIAMI FLA	1	57	25	4	340	35	5	7	14	16	19	22	26	39	69
ATLANTA GA		53	2	1	2	1			1	1	1	1	1	2	2
		54	49		47	9		1	4	5	7	8	10	13	26
		55	27	1	533	46	3	5	6	8	15	23	31	42	101
		56	4	3	51	31		3	3	26	26	26	48	48	54
		57	15	7	238	87	15	33	42	54	88	96	113	129	212
		53 57	97		533	32	1	3	5	7	9	14	27	40	93
COLUMBUS GA	1	57	19	4	167	44	9	20	23	26	33	38	54	62	69
JACKSON MISS	1	57	16	8	562	116	11	12	16	17	19	54	69	113	446
COLUMBIA SC	1	57	17	2	170	52	12	15	23	33	54	58	65	79	88
GREENVILLE SC	1	57	20	9	685	100	11	18	23	28	33	42	62	79	305
CHATTANOOGA TENN		55	45		527	24	1	2	3	4	5	7	11	18	42
		56	2	17	41	29			20	20	20	20	20	42	42
		57	18	2	731	113	16	19	20	33	54	64	88	101	186
		55 57	65		731	49	2	3	4	6	11	17	26	48	105
KNOXVILLE TENN	1	57	16	8	2717	210	9	11	14	15	26	33	48	79	88
NASHVILLE TENN	1	57	19	7	145	33	8	12	15	22	25	26	31	42	64
CHICAGO ILL		54	105		58	11	1	2	3	5	7	10	14	18	24
		55	83	1	669	29	2	3	4	5	7	9	15	24	39
		56	5	9	56	34	9	9	30	30	33	33	54	54	69
		57	1	29	29	29					33	33	33	33	33
		54 57	194		669	19	1	2	4	6	8	10	15	21	31
SPRINGFIELD ILL	1	57	15	4	721	90	9	11	18	20	24	26	54	113	238
EAST CHICAGO IND		55	12	8	34	19	8	9	15	18	20	21	22	25	26
		57	56	4	296	44	7	11	17	19	24	30	38	56	65
		55 57	68	4	296	39	7	12	16	19	22	26	34	42	63
EVANSVILLE IND	1	57	17	3	148	32	6	14	16	17	19	19	26	54	62
FORT WAYNE IND	1	57	19	4	486	53	6	15	18	22	26	28	33	42	69
INDIANAPOLIS IND	1	57	20	6	418	66	15	20	30	36	42	50	58	65	145
DETROIT MICH		53	33		5	1			1	1	1	1	2	2	2
		54	18		11	2			1	1	1	2	3	4	9
		57	15	3	114	36	8	9	21	22	25	26	42	54	113
		53 57	66		114	9		1	1	1	1	2	4	11	25
GRAND RAPIDS MICH	1	57	9	8	40	19	8	9	11	12	22	22	24	26	33
KALAMAZOO MICH	1	57	16	6	706	74	8	9	12	13	15	18	20	33	42
LANSING MICH	1	57	17	10	179	33	10	11	12	14	20	28	31	48	54
FLINT MICH	1	57	17	9	362	46	14	15	18	20	28	31	38	46	50
CINCINNATI OHIO		53	24		6	2		1	1	2	2	3	4	4	5
		54	250		107	6		1	1	2	3	4	6	10	16
		55	55	1	64	11	1	1	2	3	6	9	15	19	30
		56	40	6	67	20	8	11	14	16	18	20	22	25	33
		57	18	5	219	43	9	15	18	23	28	31	38	42	88
		53 57	387		219	9		1	2	3	4	6	10	16	23
YOUNGSTOWN OHIO	1	57	17	3	1067	108	6	7	11	14	20	23	30	42	145
CANTON OHIO	1	57	16	6	75	27	9	13	14	17	20	23	26	33	62
CLEVELAND OHIO	1	57	18	12	1050	85	15	20	22	25	28	31	38	42	50
COLUMBUS OHIO	1	57	20	4	205	57	17	20	30	33	42	50	62	88	113
TOLEDO OHIO	1	57	16	4	501	56	12	13	14	15	23	33	38	48	54

TABLE 4. RADIOACTIVITY—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10⁻¹											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
LORAIN OHIO	1	57	17	8	1179	99	13	14	18	23	33	36	42	54	79
MILWAUKEE WIS	1	57	16	3	493	63	6	11	12	18	26	36	42	54	129
RACINE WIS	1	57	15	6	231	45	9	11	15	18	22	24	28	31	212
DES MOINES IOWA	1	57	16	8	705	95	14	16	18	20	26	33	42	88	145
KANSAS CITY KANSAS	1	55 57	11	5	158	43	6	11	12	18	26	33	62	69	88
WICHITA KANSAS	1	57	17	5	3240	248	7	9	15	20	33	42	69	113	145
MINNEAPOLIS MINN	1	53	9		5	2		1	1	1	2	2	2	4	4
	1	54	47		63	7		1	1	2	4	6	9	12	14
	1	55	45	1	30	5	1	1	2	2	3	4	5	7	16
	1	56	43	4	92	17	7	9	10	11	14	16	18	20	36
	1	57	25	10	468	51	10	11	12	14	18	22	38	48	69
	1	53 57	169		468	15	1	2	3	5	9	11	13	17	28
DULUTH MINN	1	57	23	2	199	46	5	11	14	16	20	26	38	88	145
KANSAS CITY MO		53	6		3	1		1	1	1	1	2	3	3	3
		54	36		31	4		[illegible]	1	1	3	4	5	7	11
		55	21	1	80	13	1	[illegible]	3	4	9	11	15	18	20
		56	33	8	117	27	10	1[illegible]	13	15	22	26	30	36	54
		57	26	4	634	66	11	14	18	23	30	38	54	88	113
		53 57	126		634	24	1	2	4	7	11	14	20	30	50
ST LOUIS MO	1	57	16	8	1201	155	12	14	15	26	33	62	88	113	305
OMAHA NEB	1	57	17	3	278	57	7	10	12	18	26	30	54	88	145
LINCOLN NEB	1	57	17	2	223	43	6	9	12	20	26	33	39	54	88
BISMARCK ND	1	57	16	7	331	64	14	15	18	20	38	42	59	69	88
SIOUX FALLS SD	1	57	17	10	549	76	12	13	14	15	20	30	88	105	113
LITTLE ROCK ARK	1	57	17	10	713	75	11	11	14	18	33	36	42	69	88
NEW ORLEANS LA		54	54		110	16	2	3	4	5	7	8	11	23	48
		55	52	1	259	24	1	2	4	6	8	12	20	33	50
		56	15	5	53	20	6	8	10	11	15	26	33	36	42
		57	17	9	1427	151	11	12	15	20	23	25	62	88	391
		54 57	136		1427	36	2	4	5	7	9	13	23	33	54
BATON ROUGE LA	1	57	16	8	124	49	9	21	22	25	33	50	69	79	101
ALBUQUERQUE NM	1	57	15	8	575	119	14	15	18	20	33	79	113	166	572
TULSA OKLA	1	57	14	10	535	81	10	11	11	20	33	38	88	113	145
FT WORTH TEXAS	1	53	3	1	3	2		1	1	1	2	2	2	2	3
	1	54	39	1	44	14	1	4	6	9	11	12	15	23	36
	1	55	45		152	20	1	1	2	3	6	11	22	28	48
	1	56	42	3	127	23	5	8	13	15	17	20	24	35	48
	1	53 56	129		152	19	1	3	5	8	12	15	21	28	41
LAKEWORTH TEXAS	1	53	1	2	2	2					2	2	2	2	2
	1	54	32		39	13	3	4	6	8	10	12	16	19	31
	1	55	29	1	126	17	2	2	3	4	6	10	14	23	48
	1	53 55	62		126	15	2	3	4	6	9	11	15	20	36
HOUSTON TEXAS		53	10		4	2		1	1	1	2	2	3	3	4
		54	55		57	12	1	2	3	4	6	8	18	26	33
		55	32	1	196	27	3	5	9	12	13	15	22	31	54
		56	3	5	19	14		6	6	6	18	18	18	18	20
		57	21	1	539	64	2	7	12	15	26	42	69	96	113
		53 57	121		539	24	1	2	4	6	9	14	21	30	54
BELLAIRE TEXAS	1	53	2		1				1	1	1	1	1	1	1
	1	54	22		42	9	1	1	3	3	4	6	7	20	26
	1	55	17		61	8	1	1	2	3	4	4	9	11	12
	1	56	2	50	54	52			48	48	48	48	48	54	54
	1	53 56	43		61	10		1	2	3	4	6	9	14	33
DALLAS TEXAS	1	57	22	5	999	140	6	8	15	28	31	38	69	238	305
SAN ANTONIO TEXAS	1	57	19	8	1618	135	13	14	16	19	22	24	42	88	145
EL PASO TEXAS	1	57	19	9	1931	336	14	20	30	38	69	88	172	272	1353
CORPUS CHRISTI TEXAS	1	57	20	3	1494	117	9	13	14	15	18	20	26	54	238
DENVER COL		54	26	3	63	18	6	7	9	10	12	14	17	26	33
		55	33	1	339	21	1	2	2	3	6	11	16	20	39
		56	22	1	216	51	13	15	26	30	33	42	50	101	113
		57	22	2	1592	225	11	14	18	20	30	54	145	238	642
		54 57	103	1	1592	70	2	5	9	13	17	22	31	49	129
BOISE IDAHO	1	57	17	6	1423	152	7	14	18	26	33	38	88	134	145
HELENA MONTANA	1	57	16	7	241	42	8	11	12	20	27	30	33	42	88

TABLE 4. RADIOACTIVITY—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10⁻¹ MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT 10	20	30	40	50	60	70	80	90
SALT LAKE CITY UTAH		53	1								1	1	1	1	1
		54	29		170	24	2	4	7	8	10	11	15	23	33
		55	23	2	4255	295	2	4	5	6	20	31	42	54	391
		56	5	15	48	26	13	13	14	14	15	15	42	42	54
		57	18	17	54350	3063	20	26	36	42	48	54	74	79	88
		53 57	76		54350	827	3	5	7	12	18	29	40	54	65
CHEYENNE WYO	1	57	23	2	2337	300	2	15	24	33	50	69	88	305	1353
ANCHORAGE ALASKA		53	8		4	1		1	1	1	1	2	2	2	3
		54	46		110	8			1	1	1	2	3	8	12
		55	21		36	5		1	1	1	2	3	4	5	12
		57	29	3	48	11	3	6	7	8	10	11	12	14	18
		53 57	104		110	8		1	1	2	3	4	8	11	17
PHOENIX ARIZ	1	57	18	15	7319	670	20	26	30	38	48	62	88	129	305
LOS ANGELES CALIF		54	19		52	6			1	1	1	2	3	6	9
		57	15	6	273	41	12	15	18	20	24	26	33	42	88
		54 57	34		273	23		1	1	5	8	15	20	26	54
SAN FRANCISCO CALIF		55	1												
		56	6		7	3	1	1	2	2	2	3	3	7	7
		57	24	1	69	19	3	7	8	9	11	15	26	31	42
		55 57	31		69	16	1	3	6	7	9	11	15	26	42
PASADENA CALIF	1	53	6		4	2	1	1	1	1	2	3	3	3	3
	1	54	25		82	11		1	1	2	5	6	8	9	42
	1	55	36	2	60	8	2	2	3	4	5	6	7	11	18
	1	56	5	26	43	35	26	26	33	33	38	38	42	42	54
	1	57	18	2	56	24	6	14	15	18	20	28	31	33	42
	1	53 57	90		82	13	1	2	3	5	6	8	16	27	37
BERKELEY CALIF	1	54	32		51	9			1	1	2	7	11	20	33
	1	55	15	1	25	7	1	2	3	4	5	6	8	9	20
	1	54 55	47		51	9		1	1	2	4	7	10	15	24
SAN JOSE CALIF	1	54	30		110	12		1	1	2	3	6	18	22	26
	1	55	32	1	16	5	1	1	2	3	4	5	5	8	9
	1	56	16	3	81	23	3	4	9	12	15	26	28	33	42
	1	57	17	4	68	18	7	8	10	12	16	18	20	24	26
	1	54 57	95		110	12	1	2	3	4	7	9	15	21	29
SAN LEANDRO CALIF	1	55	17	1	40	5	1	1	1	1	2	2	3	4	9
	1	56	22		112	24	4	6	11	15	20	24	30	38	42
	1	55 56	39		112	16	1	1	2	4	8	11	20	30	38
SAN DIEGO CALIF	1	57	23	8	86	26	10	12	13	14	16	19	26	42	62
BURBANK CALIF	1	57	19	3	50	21	4	11	14	17	20	22	25	33	39
SAN BERNARDINO CALIF	1	57	18	8	3500	233	16	18	19	26	39	48	58	62	69
HONOLULU HAWAII		56	23	4	48	18	4	5	6	7	14	17	20	36	46
		57	26	2	52	17	3	5	6	8	15	21	24	28	33
		56 57	49	2	52	18	4	5	6	8	14	18	24	31	42
LAS VEGAS NEVADA	1	57	18	15	3800	436	18	26	28	33	39	54	113	305	642
PORTLAND OREGON		53	16		6	1				1	1	1	1	2	4
		54	88		185	14		1	1	1	4	8	11	16	42
		55	26	1	16	3		1	1	1	2	3	3	5	7
		56	24	2	188	26	2	3	8	10	11	15	30	38	54
		57	21	4	38	14	5	6	8	9	11	13	15	20	33
		53 57	175		188	13		1	1	2	5	8	11	16	35
SEATTLE WASH	1	57	24	2	79	14	2	3	4	8	9	12	16	19	30

TABLE 4. RADIOACTIVITY— URBAN STATIONS—STATE TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10⁻¹											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 57	70	1	490	46	8	11	13	15	19	28	35	45	113
MAINE TOTAL	57	14	6	38	18	6	10	11	12	14	15	23	26	38
MASSACHUSETS TOTAL	55 57	134		588	33	2	6	8	10	13	16	24	36	69
NEW HAMPSHRE TOTAL	57	11	6	140	41	6	8	9	15	20	26	42	69	129
RHODE ISLAND TOTAL	55 57	32	1	64	15	2	3	4	6	12	13	14	26	42
VERMONT TOTAL	57	18	5	188	28	7	10	10	11	14	18	23	26	42
DELAWARE TOTAL	57	20	8	526	60	11	14	23	27	30	33	45	51	88
NEW JERSEY TOTAL	55 57	66	1	740	60	10	14	17	20	25	31	40	52	69
NEW YORK TOTAL	53 57	178		268	20	1	3	6	8	11	14	19	32	56
PENNSYLVANIA TOTAL	53 57	347		930	29	1	3	5	8	11	14	18	24	41
DIS COLUMBIA TOTAL	53 57	145		163	16	1	3	5	7	10	14	19	25	36
KENTUCKY TOTAL	54 57	74	1	728	29	2	4	5	6	8	10	14	20	50
MARYLAND TOTAL	57	23	4	148	31	11	14	16	17	19	23	30	42	64
NO CAROLINA TOTAL	57	34	6	234	35	10	13	14	18	20	23	30	42	96
PUERTO RICO TOTAL	57	14	5	58	20	5	6	7	9	12	20	26	30	54
VIRGINIA TOTAL	57	33	3	243	44	7	16	18	19	26	30	42	62	113
WEST VIRGINA TOTAL	53 57	83		826	29	1	3	5	8	11	15	19	26	38
ALABAMA TOTAL	57	14	6	234	56	6	14	15	26	42	48	59	64	186
FLORIDA TOTAL	53 57	162		658	28	1	2	3	6	9	12	18	25	48
GEORGIA TOTAL	53 57	116		533	34	1	4	6	8	12	23	30	47	93
MISSISSIPPI TOTAL	57	16	8	562	116	11	12	16	17	19	54	69	113	446
SO CAROLINA TOTAL	57	37	2	685	78	11	17	23	30	39	54	64	79	113
TENNESSEE TOTAL	55 57	100		2717	72	2	4	7	11	16	23	31	54	96
ILLINOIS TOTAL	54 57	209		721	24	1	3	4	6	8	12	16	23	33
INDIANA TOTAL	55 57	124	3	486	45	7	14	17	20	24	30	39	55	67
MICHIGAN TOTAL	53 57	132		706	27	1	1	2	6	10	14	21	29	46
OHIO TOTAL	53 57	493		1179	23	1	1	2	4	7	11	17	23	37
WISCONSIN TOTAL	57	33	3	493	55	6	11	14	18	23	28	33	42	145
IOWA TOTAL	57	18	8	705	95	14	16	18	20	26	33	42	88	145
KANSAS TOTAL	55 57	28	5	3240	168	7	11	15	19	26	42	64	79	145
MINNESOTA TOTAL	53 57	196		468	19	1	2	4	6	10	11	15	19	38
MISSOURI TOTAL	53 57	144		1201	41	1	3	4	9	12	16	25	35	80
NEBRASKA TOTAL	57	34	2	278	50	6	10	12	19	24	31	42	69	145
NORTH DAKOTA TOTAL	57	16	7	331	64	14	15	18	20	38	42	59	69	88
SOUTH DAKOTA TOTAL	57	17	10	549	76	12	13	14	15	20	30	88	105	113
ARKANSAS TOTAL	57	17	10	713	75	11	11	14	18	33	36	42	69	88
LOUISIANA TOTAL	54 57	156		1427	37	2	4	6	8	11	19	26	40	66
NEW MEXICO TOTAL	57	15	8	575	119	14	15	18	20	33	79	113	166	572
OKLAHOMA TOTAL	57	14	10	535	81	10	11	11	20	33	38	88	113	145
TEXAS TOTAL	53 57	435		1931	48	1	3	5	8	12	16	23	33	62
COLORADO TOTAL	54 57	103	1	1592	70	2	5	9	13	17	22	31	49	129
IDAHO TOTAL	57	17	6	1423	152	7	14	18	26	33	38	88	134	145
MONTANA TOTAL	57	18	7	241	42	8	11	12	20	27	30	33	42	88
UTAH TOTAL	53 57	76		54350	827	3	5	7	12	18	29	40	54	85
WYOMING TOTAL	57	23	2	2337	300	2	15	24	33	50	69	88	305	1353
ALASKA TOTAL	53 57	104		110	7		1	1	2	2	4	6	10	15
ARIZONA TOTAL	57	16	15	7319	670	20	26	30	38	48	62	88	129	305
CALIFORNIA TOTAL	53 57	398		3500	25	1	2	3	6	9	13	19	27	42
HAWAII TOTAL	56 57	49	2	52	18	4	5	6	8	14	18	24	31	42
NEVADA TOTAL	57	18	15	3800	436	18	26	28	33	39	54	113	30[illegible]	642
OREGON TOTAL	53 57	175		188	13		1	1	2	5	8	11	16	35
WASHINGTON TOTAL	57	24	2	79	14	2	3	4	8	9	12	16	19	30

TABLE 4. RADIOACTIVITY—URBAN STATIONS—REGIONAL AND GRAND TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW ENGLND TOTAL	55 57	279		588	33	3	7	10	12	14	18	26	37	69
MID ATLNTC TOTAL	53 57	611		930	31	1	4	7	9	12	16	21	30	53
MID EAST TOTAL	53 57	406		826	26	2	4	6	9	13	17	22	30	48
SOUTH EAST TOTAL	53 57	445		2717	45	1	3	6	9	13	19	26	43	62
MID WEST TOTAL	53 57	991		1179	27	1	2	4	7	10	15	20	28	47
GRT PLAINS TOTAL	53 57	453		3240	44	1	3	6	10	13	17	24	37	62
GULF SOUTH TOTAL	53 57	637		1931	49	2	3	6	9	13	17	25	37	77
ROCKY MNTN TOTAL	53 57	237		54350	339	3	6	11	15	20	29	41	67	159
PAC COAST TOTAL	53 57	786		7319	43	1	1	3	4	8	11	16	25	41
GRAND TOTAL	53 57	4845		54350	52	1	3	5	8	12	16	22	33	59

TABLE 4. RADIOACTIVITY—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
MIDDLESEX CNTY MASS	1	55	10	1	9	2		1	1	1	1	2	2	3	3
	1	56	18		85	13	2	3	5	6	7	9	14	15	20
	1	55 56	28		85	9	1	1	2	2	5	6	8	12	18
KANAWHA CO W VA	1	54	26	1	34	8	1	2	3	4	5	7	9	11	15
	1	55	18	3	60	12	3	3	3	4	6	9	12	17	20
	1	56	2	31	46	38			33	33	33	33	33	54	54
	1	54 56	46	1	60	11	2	3	3	4	6	9	11	16	30
HILLSBOROUGH CO FLA	1	53	2		1				1	1	1	1	1	1	1
	1	54	34		40	7		1	2	3	4	5	8	10	23
	1	55	27	1	613	30	1	1	2	4	6	7	11	14	20
	1	56	12	7	29	15	7	9	13	13	14	14	15	23	26
	1	53 56	75		613	17		1	2	4	6	9	11	14	25
FULTON CO GEORGIA	1	53	2		1				1	1	1	1	1	1	1
	1	54	44		55	8		1	2	3	4	7	8	9	18
	1	55	22	1	531	35	1	2	3	4	8	12	14	26	48
	1	53 55	68		531	16	1	1	2	3	4	7	9	13	26
HAMILTON COUNTY OHIO	1	53	6		5	1			1	1	1	1	1	2	2
	1	54	52		23	3		1	1	1	2	3	4	7	8
	1	55	5	1	11	3	1	1	2	2	2	2	3	3	12
	1	53 55	63		23	3		1	1	1	2	2	4	6	8
TONKA BAY MINN	1	53	7		7	2			1	1	1	1	2	4	4
	1	54	37		23	3			1	1	2	2	3	5	8
	1	53 54	44		23	3			1	1	1	2	3	4	8
EDINA MINN	1	54	5	5	18	12	6	6	11	11	12	12	15	15	20
	1	55	14	2	70	14	2	3	5	8	9	10	11	12	42
	1	54 55	19	2	70	13	2	5	6	9	10	11	12	15	26
DENVER COUNTY COLO	1	54	21	3	66	25	4	9	10	11	15	28	33	48	59
	1	55	25		517	46	1	2	4	7	9	11	15	20	145
	1	56	16	8	172	49	20	27	29	30	32	38	42	79	88
	1	54 56	62		517	40	3	6	9	11	16	27	32	46	79
SALT LAKE CO UTAH	1	53	1								1	1	1	1	1
	1	54	27	1	170	24	1	5	7	9	12	15	26	33	62
	1	55	22	2	26437	1944	2	3	5	7	9	12	15	30	54
	1	53 55	50		26437	868	1	3	6	8	10	14	20	30	62
MULTNOMAH CNTY ORE	1	54	16		116	20	1	1	2	2	6	9	12	23	26
	1	55	3	1	4	2		1	1	1	2	2	2	2	4
	1	54 55	19		116	17		1	1	2	4	6	9	15	26
GRAND TOTAL		53 56	474		26437	102	1	1	2	3	5	8	11	17	33

TABLE 4. RADIOACTIVITY—NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROMICROCURIES PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
LITCHFIELD CNTY CONN	1	55 56	11		21	9	1	3	4	5	7	11	12	18	20
ACADIA NATNL PARK ME	1	57	16	2	32	15	4	6	7	10	12	20	22	26	28
MT MANSFIELD FRST VT	1	57	7	8	189	60	9	9	12	20	42	42	69	113	113
WORCESTER COUNTY MD	1	57	24	5	374	35	5	8	9	14	17	20	25	33	54
CAPE HATTERAS NC	1	57	8	10	55	19	12	13	13	14	14	15	18	18	20
SHENANDOAH PARK VA	1	57	25	8	654	73	12	14	18	22	26	36	48	62	186
HOLLY RIVER PK W VA	1	57	25	3	710	59	9	12	18	22	26	36	48	62	82
GULF SHORES PARK ALA	1	57	12	8	126	35	9	12	16	18	19	20	26	54	88
FLORIDA KEYS FLORIDA	1	57	14	8	174	55	9	12	22	25	26	42	75	82	145
OATLAND ISLAND GA	1	57	16	4	54	22	6	7	11	12	18	26	30	38	42
JACKSON COUNTY MISS	1	57	20	9	1129	135	11	13	15	18	20	23	26	54	391
FT DONELSON TENN	1	57	16	9	353	73	10	11	20	22	26	48	54	69	186
SANGAMON COUNTY ILL	1	57	13	13	87	26	13	15	20	21	23	23	24	25	42
HURON COUNTY MICH	1	57	30	5	226	36	7	9	10	12	16	19	26	54	69
PERRYS MEMORIAL OHIO	1	57	8	5	64	22	6	10	10	11	12	15	20	20	54
ELLIS COUNTY KANSAS	1	57	11	5	1316	159	6	9	23	26	54	62	69	79	88
COOK COUNTY MINN	1	57	14	9	122	24	9	11	12	14	14	15	18	20	54
SHANNON COUNTY MO	1	57	18	8	239	47	12	15	16	19	26	31	42	54	105
THOMAS COUNTY NEBR	1	57	11	3	560	92	3	7	9	18	26	54	69	129	145
WARD COUNTY N D	1	57	13	4	36	12	4	5	5	6	11	12	15	18	26
BLACK HILLS FRST S D	1	57	5	15	730	164	15	15	20	20	30	30	33	33	823
YELLOWSTONE PARK WYO	1	57	2	20	100	60			20	20	20	20	20	113	113
PT WORONZOF ALASKA	1	56 57	45		38	8	1	2	3	4	6	8	10	12	22
GRAND CANYON ARIZ	1	57	26	7	830	134	14	17	23	30	39	88	129	186	391
WAIMANOLO HAWAII	1	57	22	2	86	18	3	4	6	7	9	16	18	33	42
GRAND TOTAL		55 57	412		1316	52	5	8	11	14	18	22	30	48	88

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
HARTFORD CONN	57												
NUMBER OF SAMPLES			2		2	2	1	3	2	2	2	3	2
MAXIMUM			13		85	30	41	490	100	41	31	14	40
AVERAGE			9		59	22	41	173	56	34	27	11	27
MINIMUM			5		33	15	41	12	13	27	23	5	15
NEW HAVEN CONN	57												
NUMBER OF SAMPLES		2	2	2	2	2	1	3	2	1	3	1	2
MAXIMUM		12	18	38	41	46	150	38	18	169	43	9	25
AVERAGE		12	14	28	28	43	150	29	14	169	29	9	20
MINIMUM		12	11	19	15	40	150	22	11	169	11	9	16
STAMFORD CONN	57												
NUMBER OF SAMPLES		1			1	3	2	3	1	3	1	2	3
MAXIMUM		10			33	74	29	304	10	291	88	8	16
AVERAGE		10			33	38	22	155	10	141	88	4	13
MINIMUM		10			33	16	15	45	10	16	88	1	12
PORTLAND MAINE	57												
NUMBER OF SAMPLES			1	1		1	2	2		1	1	2	3
MAXIMUM			12	14		10	28	24		22	38	37	15
AVERAGE			12	14		10	19	17		22	38	28	10
MINIMUM			12	14		10	10	10		22	38	19	6
BOSTON MASS	55 57												
NUMBER OF SAMPLES		3	2	1	2	4	3	6	4	3	7	8	5
MAXIMUM		7	11	17	15	156	26	21	13	99	89	18	17
AVERAGE		6	9	17	11	44	24	9	8	44	27	4	8
MINIMUM		5	8	17	7	4	22	1	6	2			1
EVERETT MASS	55 56												
NUMBER OF SAMPLES		1	1	2	1	2	2		2	1			2
MAXIMUM			11	10	19	588	9		7	8			12
AVERAGE			11	9	19	299	6		6	8			9
MINIMUM			11	8	19	11	3		5	8			7
LAWRENCE MASS	57												
NUMBER OF SAMPLES				1		3	2	2	2	2	2	1	2
MAXIMUM				9		36	38	38	17	83	65	19	19
AVERAGE				9		22	31	25	13	65	38	19	17
MINIMUM				9		10	25	13	9	47	12	19	16
LYNN MASS	57												
NUMBER OF SAMPLES			1			3	2	2	1	2	2	2	2
MAXIMUM			19			53	250	13	320	36	104	9	14
AVERAGE			19			28	141	13	320	34	78	9	12
MINIMUM			19			12	32	13	320	32	53	9	10
SOMERVILLE MASS	57												
NUMBER OF SAMPLES			1	1		1	2	3	2	3	1	2	2
MAXIMUM			6	20		81	22	102	207	179	39	15	17
AVERAGE			6	20		81	15	41	109	86	39	13	9
MINIMUM			6	20		81	9	4	11	39	39	11	1
WORCESTER MASS	57												
NUMBER OF SAMPLES				1		2	3	3	2	3	2	1	3
MAXIMUM				28		45	37	28	11	214	53	14	11
AVERAGE				28		30	34	16	10	87	50	14	7
MINIMUM				28		15	32	7	10	13	48	14	5
MANCHESTER N H	57												
NUMBER OF SAMPLES						2	1		2	1	2	1	2
MAXIMUM						40	16		140	120	68	6	9
AVERAGE						31	16		76	120	43	6	8
MINIMUM						23	16		13	120	18	6	8
PROVIDENCE R I	55 57												
NUMBER OF SAMPLES		6	6	3	1	1	3	2	3	1	2	1	3
MAXIMUM		6	14	15	16	13	64	12	34	60	52	14	15
AVERAGE		3	4	8	16	13	38	10	23	60	33	14	14
MINIMUM		2	1	4	16	13	23	9	10	60	14	14	13
BURLINGTON VT	57												
NUMBER OF SAMPLES						2	3	2	2	2	2	3	2
MAXIMUM						71	27	15	11	24	188	15	11
AVERAGE						40	21	11	10	21	114	12	8
MINIMUM						9	16	7	10	19	40	10	5
WILMINGTON DEL	57												
NUMBER OF SAMPLES				1		3	3	2	3		2	5	1
MAXIMUM				128		74	526	46	32		53	28	14
AVERAGE				128		40	200	28	29		50	18	14
MINIMUM				128		12	27	10	27		48	8	14
CAMDEN N J	57												
NUMBER OF SAMPLES						2	2	2	3	2	1	3	2
MAXIMUM						59	230	34	17	104	17	52	19
AVERAGE						38	135	23	12	73	17	27	18
MINIMUM						18	41	12	7	42	17	15	17
JERSEY CITY N J	57												
NUMBER OF SAMPLES						3	2	3	2	1	3	2	2
MAXIMUM						40	30	385	26	63	116	25	58
AVERAGE						28	29	148	20	63	59	16	43
MINIMUM						22	28	25	15	63	18	8	29

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
EAST ORANGE N J	57												
NUMBER OF SAMPLES						2	1	2	2	2		1	[illegible]
MAXIMUM						66	10	20	31	740		9	43
AVERAGE						59	10	14	30	617		9	28
MINIMUM						50	10	9	29	495		9	13
NEWARK N J	57												
NUMBER OF SAMPLES						1	2	1	1	2	2		
MAXIMUM						23	20	17	10	54	43		
AVERAGE						23	18	17	10	40	36		
MINIMUM						23	17	17	10	26	30		
NEW YORK N Y	53 57												
NUMBER OF SAMPLES		8	4	6	4	8	7	8	6	9	9	15	16
MAXIMUM		19	14	10	5	46	28	183	42	75	61	94	29
AVERAGE		6	5	2	3	15	9	26	14	25	31	17	10
MINIMUM			1		1		1	3	4	2	9	1	1
BINGHAMTON N Y	57												
NUMBER OF SAMPLES						2	2	2	2	2	3	2	2
MAXIMUM						16	13	15	24	23	41	17	20
AVERAGE						15	9	14	17	19	21	12	15
MINIMUM						15	6	14	10	15	3	8	10
BUFFALO N Y	57												
NUMBER OF SAMPLES						2	3	2	1	2	1	1	1
MAXIMUM						52	19	23	14	36	62	6	11
AVERAGE						27	15	17	14	20	62	6	11
MINIMUM						2	8	11	14	5	62	6	11
SCHENECTADY N Y	57												
NUMBER OF SAMPLES						2	1	2	2	2	2	2	1
MAXIMUM						73	14	15	39	41	70	25	6
AVERAGE						67	14	11	24	30	63	17	6
MINIMUM						61	14	8	9	19	57	9	6
SYRACUSE N Y	57												
NUMBER OF SAMPLES						3	1	3	2	2	2	3	2
MAXIMUM						67	24	98	52	115	79	19	15
AVERAGE						38	24	37	32	89	73	10	11
MINIMUM						7	24	4	12	63	68	5	8
UTICA N Y	57												
NUMBER OF SAMPLES						2	1	3	1	3	2	2	2
MAXIMUM						12	30	268	12	49	91	13	11
AVERAGE						10	30	99	12	28	65	10	9
MINIMUM						8	30	15	12	16	40	8	5
PHILADELPHIA PA	53 57												
NUMBER OF SAMPLES		21	26	22	29	21	19	11	11	18	17	29	34
MAXIMUM		16	105	39	912	544	22	223	20	39	53	37	29
AVERAGE		8	7	10	56	49	8	28	4	13	15	14	12
MINIMUM					1		1	2	1	1	3		
PITTSBURGH PA	57												
NUMBER OF SAMPLES						2	3	2	2	2	2	2	2
MAXIMUM						130	65	95	228	930	62	15	10
AVERAGE						86	35	55	124	479	51	13	8
MINIMUM						43	19	16	20	28	40	11	7
ALLENTOWN PA	57												
NUMBER OF SAMPLES						3	2	2	3	1	3	1	3
MAXIMUM						26	43	30	13	79	19	12	20
AVERAGE						21	24	19	11	79	13	12	11
MINIMUM						13	6	8	8	79	5	12	4
JOHNSTOWN PA	57												
NUMBER OF SAMPLES						1	3	1	2	1	1	1	
MAXIMUM						43	21	14	119	127	61	10	
AVERAGE						43	14	14	69	127	61	10	
MINIMUM						43	4	14	19	127	61	10	
LANCASTER PA	57												
NUMBER OF SAMPLES						1	2	2	2	2	1		
MAXIMUM						30	34	41	468	314	47		
AVERAGE						30	25	25	244	169	47		
MINIMUM						30	17	9	20	24	47		
SCRANTON PA	57												
NUMBER OF SAMPLES						2	2	1	2	2	3	2	2
MAXIMUM						60	168	42	42	96	65	17	31
AVERAGE						39	111	42	29	61	58	12	21
MINIMUM						18	34	42	16	26	47	8	12
WASHINGTON DC	53 57												
NUMBER OF SAMPLES		8	11	13	13	14	15	11	16	10	13	11	10
MAXIMUM		35	29	46	51	39	163	25	93	41	98	18	16
AVERAGE		12	9	20	16	20	20	9	15	19	29	6	5
MINIMUM			1		1	2	1	5	2	2	1	2	1

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10^{1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LOUISVILLE KY	54 57												
NUMBER OF SAMPLES		3	4	1	6	5	5	13	13	7	6	1	10
MAXIMUM		28	17	12	11	64	31	65	41	728	316	50	51
AVERAGE		18	8	12	3	21	12	10	8	130	84	50	14
MINIMUM		3	3	12	1	4	3	1	1	5	12	50	3
BALTIMORE MD	57												
NUMBER OF SAMPLES		2	2		2	1	3	2	3	2	2	2	2
MAXIMUM		18	17		57	22	53	69	148	28	62	19	14
AVERAGE		17	13		34	22	29	53	64	28	41	16	9
MINIMUM		17	10		12	22	15	38	20	28	20	13	4
CHARLOTTE NC	57												
NUMBER OF SAMPLES						2	3	2	2	2	1	2	3
MAXIMUM						45	20	45	234	63	102	21	20
AVERAGE						30	16	33	137	48	102	16	15
MINIMUM						15	11	21	41	34	102	12	11
WINSTON SALEM NC	57												
NUMBER OF SAMPLES						2	2	2	3	1	3	2	2
MAXIMUM						23	26	109	106	8	31	16	13
AVERAGE						23	25	61	50	8	21	11	11
MINIMUM						23	24	14	18	8	15	6	10
SAN JUAN PUERTO RICO	57												
NUMBER OF SAMPLES							2	2	2	2	3	2	1
MAXIMUM							12	23	50	58	29	7	18
AVERAGE							9	22	29	42	14	6	18
MINIMUM							6	22	9	27	6	5	18
NORFOLK VA	57												
NUMBER OF SAMPLES						2	2	3	1	2	1	3	2
MAXIMUM						30	115	98	7	59	15	22	18
AVERAGE						24	79	47	7	46	15	14	14
MINIMUM						19	44	20	7	33	15	3	10
RICHMOND VA	57												
NUMBER OF SAMPLES						2	2	2	2	2	3	1	3
MAXIMUM						94	243	155	45	55	90	17	29
AVERAGE						61	124	88	30	47	45	17	21
MINIMUM						29	6	22	16	39	16	17	17
CHARLESTON W VA	53 57												
NUMBER OF SAMPLES		3		2	5	6	5	6	4	6	8	6	13
MAXIMUM		4		7	14	52	38	28	23	323	62	14	30
AVERAGE		1		4	6	18	14	11	10	66	18	8	13
MINIMUM				1	2	1	3		2	3	3	3	
WHEELING W VA	57												
NUMBER OF SAMPLES						1	2	1	2	2	2	3	2
MAXIMUM						55	33	16	23	826	96	23	17
AVERAGE						55	32	16	18	431	64	15	16
MINIMUM						55	32	16	13	36	33	7	16
BIRMINGHAM ALA	57												
NUMBER OF SAMPLES						3	2	2	1	2	3	1	
MAXIMUM						61	43	234	59	146	67	15	
AVERAGE						27	30	140	59	85	39	15	
MINIMUM						6	18	46	59	25	13	15	
TAMPA FLA	53 57												
NUMBER OF SAMPLES		14	10	11	11	10	10	13	14	10	8	11	15
MAXIMUM		64	32	43	119	130	476	137	431	124	658	74	67
AVERAGE		16	8	15	31	36	60	24	37	21	152	27	14
MINIMUM				1	2	6	4	2				2	
MIAMI FLA	57												
NUMBER OF SAMPLES		2	2	1	2	3	1	3	2	2	2	3	2
MAXIMUM		14	4	26	14	42	22	72	41	340	56	46	19
AVERAGE		9	4	26	10	26	22	39	24	183	36	31	14
MINIMUM		5	4	26	6	18	22	20	7	26	17	14	9
ATLANTA GA	53 57												
NUMBER OF SAMPLES		10	13	9	7	6	10	7	8	5	6	5	11
MAXIMUM		51	104	69	533	112	115	238	92	196	97	24	47
AVERAGE		8	14	19	113	30	34	45	21	70	45	14	19
MINIMUM				1	5	3	7	2	2	5	6	5	1
COLUMBUS GA	57												
NUMBER OF SAMPLES					1	3	2	2	2	2	3	2	2
MAXIMUM					121	69	9	52	21	167	61	36	29
AVERAGE					121	43	6	41	19	94	58	23	26
MINIMUM					121	24	4	30	18	22	55	10	24
JACKSON MISS	57												
NUMBER OF SAMPLES						2	1	3	3	1	3	2	1
MAXIMUM						12	88	102	441	17	562	16	15
AVERAGE						11	88	54	173	17	340	12	15
MINIMUM						10	88	17	19	17	20	8	15

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
COLUMBIA SC	57												
NUMBER OF SAMPLES						2	3	2	3	1	2	3	1
MAXIMUM						69	170	98	71	42	77	30	15
AVERAGE						59	83	78	37	42	73	18	15
MINIMUM						49	11	58	16	42	69	2	15
GREENVILLE SC	57												
NUMBER OF SAMPLES						3	3	3	2	3	2	2	2
MAXIMUM						54	685	247	63	475	70	26	19
AVERAGE						34	241	100	51	192	66	19	17
MINIMUM						12	9	23	39	31	62	12	16
CHATTANOOGA TENN	55 57												
NUMBER OF SAMPLES		14	5	3	5	5	5	8	9	4	2	2	3
MAXIMUM		41	53	12	116	527	48	481	55	731	90	105	21
AVERAGE		7	13	8	34	134	21	94	15	212	87	53	16
MINIMUM		2	3	6	1	27	11	1		3	84	2	10
KNOXVILLE TENN	57												
NUMBER OF SAMPLES						1	3	2	2	3		2	3
MAXIMUM						44	2717	88	32	230		16	14
AVERAGE						44	913	58	28	119		13	11
MINIMUM						44	8	29	24	52		11	8
NASHVILLE TENN	57												
NUMBER OF SAMPLES				1		3	2	2	2	3	2	2	2
MAXIMUM				9		61	28	26	27	145	57	21	14
AVERAGE				9		38	19	24	20	83	39	14	11
MINIMUM				9		21	10	23	13	40	22	7	9
CHICAGO ILL	54 57												
NUMBER OF SAMPLES		14	10	12	8	13	24	26	23	19	10	15	20
MAXIMUM		56	29	383	99	669	23	11	8	58	26	49	49
AVERAGE		13	12	78	27	69	9	4	3	11	15	20	18
MINIMUM		2	2	1	3			1	1		2	5	1
SPRINGFIELD ILL	57												
NUMBER OF SAMPLES						2	1	3	1	2	2	1	3
MAXIMUM						27	50	188	721	109	25	12	21
AVERAGE						24	50	111	721	56	17	12	16
MINIMUM						21	50	17	721	4	10	12	9
EAST CHICAGO IND	55 57												
NUMBER OF SAMPLES				4	5	14	5	10	6	3	10	6	5
MAXIMUM				13	38	61	26	296	61	39	252	35	69
AVERAGE				10	27	30	22	68	26	31	83	19	23
MINIMUM				8	16	5	18	8	16	21	7	4	6
EVANSVILLE IND	57												
NUMBER OF SAMPLES						3	2	2	2	2	2	1	3
MAXIMUM						44	38	148	26	18	64	3	20
AVERAGE						21	28	105	23	16	41	3	19
MINIMUM						6	19	63	20	14	19	3	18
FORT WAYNE IND	57												
NUMBER OF SAMPLES						2	2	3	1	2	4	3	2
MAXIMUM						32	31	486	19	65	81	15	24
AVERAGE						27	23	173	19	61	46	8	20
MINIMUM						23	16	12	19	58	29	4	16
INDIANAPOLIS IND	57												
NUMBER OF SAMPLES						3	2	2	3	2	4	2	2
MAXIMUM						68	44	39	418	57	153	23	28
AVERAGE						49	31	27	202	48	74	14	20
MINIMUM						31	19	16	58	40	39	6	13
DETROIT MICH	53 57												
NUMBER OF SAMPLES			4	3	4	4	5	2	3	3	2	35	1
MAXIMUM			1	2	11	60	26	5	45	114	100	8	22
AVERAGE				1	3	21	13	4	39	47	60	1	22
MINIMUM				1	1		8	3	32	4	21		22
KALAMAZOO MICH	57												
NUMBER OF SAMPLES						2	2	2	2	2	1	3	2
MAXIMUM						36	13	250	16	706	6	16	14
AVERAGE						33	11	140	14	361	6	13	11
MINIMUM						30	10	31	12	16	6	8	8
LANSING MICH	57												
NUMBER OF SAMPLES						3	2	2	3	1	2	2	2
MAXIMUM						33	31	179	47	48	65	13	11
AVERAGE						25	30	99	23	48	39	11	10
MINIMUM						13	29	20	11	48	13	10	10
FLINT MICH	57												
NUMBER OF SAMPLES						1	2	3	2	2	3	2	2
MAXIMUM						20	38	54	362	43	46	28	17
AVERAGE						20	33	28	188	36	34	22	13
MINIMUM						20	29	14	15	30	24	16	9
CINCINNATI OHIO	53 57												
NUMBER OF SAMPLES		23	26	76	34	29	28	27	21	32	23	33	35
MAXIMUM		35	29	107	54	64	42	73	17	219	107	32	34
AVERAGE		5	6	7	11	10	10	10	4	20	16	8	11
MINIMUM							1	2	1	2	1		

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) $\times 10^{1}$

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES						2	1	3	2	2	2	3	2
MAXIMUM						29	15	32	17	1067	119	24	7
AVERAGE						16	15	18	15	747	77	18	6
MINIMUM						3	15	11	14	427	35	9	5
CANTON OHIO	57												
NUMBER OF SAMPLES						3	1	3	3	1	2	2	3
MAXIMUM						75	48	17	67	23	25	23	27
AVERAGE						48	48	15	31	23	24	18	18
MINIMUM						6	48	14	11	23	24	13	8
CLEVELAND OHIO	57												
NUMBER OF SAMPLES						3	2	2	2	2	2	3	2
MAXIMUM						49	21	30	28	1050	50	28	22
AVERAGE						41	18	26	21	540	47	21	20
MINIMUM						37	16	23	14	31	45	12	19
COLUMBUS OHIO	57												
NUMBER OF SAMPLES						2	2	2	2	3	4	3	2
MAXIMUM						52	29	134	65	205	74	33	31
AVERAGE						40	24	120	52	120	54	19	24
MINIMUM						28	19	106	40	47	41	4	17
TOLEDO OHIO	57												
NUMBER OF SAMPLES						2	2	1	2	3	2	2	2
MAXIMUM						63	23	32	501	45	49	14	13
AVERAGE						38	21	32	256	35	44	13	8
MINIMUM						14	19	32	11	21	39	13	4
LORAIN OHIO	57												
NUMBER OF SAMPLES						2	3	1	2	2	3	2	2
MAXIMUM						78	42	16	16	1179	74	22	25
AVERAGE						61	38	16	15	597	51	15	19
MINIMUM						44	34	16	14	15	28	8	14
MILWAUKEE WIS	57												
NUMBER OF SAMPLES					2	2	1	2	2	2	3	2	2
MAXIMUM					125	37	10	129	493	38	34	11	13
AVERAGE					85	27	10	110	252	31	27	7	9
MINIMUM					45	17	10	91	12	25	18	3	5
RACINE WIS	57												
NUMBER OF SAMPLES						2	2	2	2	1	2	2	2
MAXIMUM						25	21	29	28	215	231	11	27
AVERAGE						24	18	20	20	215	125	10	16
MINIMUM						24	16	12	13	215	20	9	6
DES MOINES IOWA	57												
NUMBER OF SAMPLES						3	2	2	2	2	2	2	3
MAXIMUM						86	705	143	28	374	115	27	15
AVERAGE						47	363	80	24	197	78	22	12
MINIMUM						16	21	18	21	20	41	18	8
KANSAS CITY KANSAS	55 57												
NUMBER OF SAMPLES			1	1		7	1		1				
MAXIMUM			12	10		73	158		5				
AVERAGE			12	10		42	158		5				
MINIMUM			12	10		20	158		5				
WICHITA KANSAS	57												
NUMBER OF SAMPLES						1	3	3	2	1	2	3	2
MAXIMUM						40	50	3240	106	11	405	9	22
AVERAGE						40	27	1146	69	11	231	7	18
MINIMUM						40	16	79	33	11	57	5	14
MINNEAPOLIS MINN	53 57												
NUMBER OF SAMPLES		10	10	12	12	14	14	13	25	13	17	16	13
MAXIMUM		18	16	63	20	61	35	468	258	92	57	20	30
AVERAGE		8	7	13	9	19	13	43	18	20	15	6	10
MINIMUM		1		1		1	3	2	2		1	1	
DULUTH MINN	57												
NUMBER OF SAMPLES		1	2	2		3	2	2	2	2	3	2	2
MAXIMUM		5	17	30		127	19	25	199	152	118	5	11
AVERAGE		5	13	23		58	16	21	111	96	101	3	8
MINIMUM		5	10	16		13	13	17	24	41	88	2	6
KANSAS CITY MO	53 57												
NUMBER OF SAMPLES		9	8	13	12	13	11	11	12	8	15	8	6
MAXIMUM		74	45	35	80	82	41	137	634	117	136	16	30
AVERAGE		21	13	10	23	20	16	21	75	37	27	7	7
MINIMUM			1		1		1	2	2	2	1	3	
ST LOUIS MO	57												
NUMBER OF SAMPLES					1	3	2	2	2	3	2	2	1
MAXIMUM					60	31	29	116	1201	738	239	14	11
AVERAGE					60	19	25	103	613	291	143	11	11
MINIMUM					60	14	21	90	26	58	48	8	11
OMAHA NEB	57												
NUMBER OF SAMPLES						2	2	2	2	2	2	3	2
MAXIMUM						20	143	75	278	169	33	26	12
AVERAGE						11	81	47	170	107	32	16	9
MINIMUM						3	20	20	63	45	32	12	7

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LINCOLN NEB	57												
NUMBER OF SAMPLES						2	2	2	2	2	3	1	3
MAXIMUM						19	54	110	29	223	38	8	35
AVERAGE						10	40	72	27	153	20	8	18
MINIMUM						2	26	35	26	83	5	8	10
BISMARCK ND	57												
NUMBER OF SAMPLES						2	2	2	3	1	3	2	1
MAXIMUM						41	36	331	61	61	81	15	13
AVERAGE						41	27	267	38	61	50	11	13
MINIMUM						41	19	203	17	61	16	7	13
SIOUX FALLS SD	57												
NUMBER OF SAMPLES						2	2	2	2	2	3	2	2
MAXIMUM						32	13	74	549	89	209	14	19
AVERAGE						23	11	52	323	52	105	14	16
MINIMUM						14	10	31	97	15	10	14	14
LITTLE ROCK ARK	57												
NUMBER OF SAMPLES						2	2	2	3	2	2	2	2
MAXIMUM						34	12	138	713	49	84	16	12
AVERAGE						24	11	85	263	44	59	15	11
MINIMUM						14	10	33	19	39	34	14	11
NEW ORLEANS LA	54 57												
NUMBER OF SAMPLES		9	7	10	7	12	15	15	10	13	11	13	16
MAXIMUM		53	98	49	104	259	39	61	20	1427	312	67	110
AVERAGE		10	27	24	29	48	13	9	5	156	36	29	28
MINIMUM		2	5	6	8	6	5	1	1	1		1	4
BATON ROUGE LA	57												
NUMBER OF SAMPLES					1	2	2	2	3	1	3	2	2
MAXIMUM					23	44	60	52	92	87	124	28	26
AVERAGE					23	34	34	39	55	87	103	18	21
MINIMUM					23	25	9	26	23	87	87	8	16
ALBUQUERQUE NM	57												
NUMBER OF SAMPLES						2	2	2	1	2	2	2	2
MAXIMUM						70	375	150	18	539	148	21	19
AVERAGE						50	297	110	18	317	81	14	16
MINIMUM						31	20	70	18	95	14	8	13
TULSA OKLA	57												
NUMBER OF SAMPLES						2	1		3	1	2	3	2
MAXIMUM						74	11		124	39	535	30	19
AVERAGE						42	11		115	39	287	16	15
MINIMUM						10	11		103	39	40	10	11
FT WORTH TEXAS	53 56												
NUMBER OF SAMPLES		8	8	12	7	10	12	11	13	12	13	14	9
MAXIMUM		38	152	100	23	145	34	45	47	127	68	44	32
AVERAGE		12	32	27	13	33	15	12	14	25	15	14	18
MINIMUM		2	1	6	6	4	1	2	1		1		1
LAKEWORTH TEXAS	53 55												
NUMBER OF SAMPLES		4	5	5	4	5	6	8	7	5	3	5	5
MAXIMUM		5	13	47	51	126	20	8	8	32	13	37	31
AVERAGE		3	5	26	22	51	12	5	3	13	10	23	13
MINIMUM		2		12	4	2	3	3	1	4	6	16	2
HOUSTON TEXAS	53 57												
NUMBER OF SAMPLES		9	8	10	6	9	13	12	9	6	10	12	17
MAXIMUM		23	196	29	37	84	31	123	107	539	101	57	39
AVERAGE		6	52	11	23	25	14	23	17	110	28	20	13
MINIMUM			1	1	3	5	3	1			2	1	
BELLAIRE TEXAS	53 56												
NUMBER OF SAMPLES		6	3	3	1	1	2	3	7	5	4	4	4
MAXIMUM		54	5	13	61	4	9	7	7	21	25	42	16
AVERAGE		20	3	7	61	4	6	4	3	6	8	21	9
MINIMUM		1	1		61	4	4	2	1		1	1	
DALLAS TEXAS	57												
NUMBER OF SAMPLES		1	2	3		3	2	2	2	2	1	3	1
MAXIMUM		15	9	57		31	999	181	672	245	298	38	31
AVERAGE		15	7	33		22	618	147	345	142	298	18	31
MINIMUM		15	5	10		6	238	114	19	40	298	7	31
SAN ANTONIO TEXAS	57												
NUMBER OF SAMPLES			1	1	1	2	2	2	2	2	2	2	2
MAXIMUM			24	41	15	21	95	85	347	1618	140	16	15
AVERAGE			24	41	15	19	56	66	185	816	78	14	11
MINIMUM			24	41	15	18	18	48	23	14	17	13	6
EL PASO TEXAS	57												
NUMBER OF SAMPLES						2	2	4	2	3	2	2	2
MAXIMUM						64	84	277	28	1931	241	24	32
AVERAGE						50	60	201	21	1662	127	16	25
MINIMUM						36	37	168	14	1276	14	9	19
CORPUS CHRISTI TEXAS	57												
NUMBER OF SAMPLES		1	1		1	2	2	2	2	3	1	2	3
MAXIMUM		13	15		3	17	17	44	234	1494	66	24	21
AVERAGE		13	15		3	14	12	29	132	592	66	18	19
MINIMUM		13	15		3	11	8	15	31	13	66	13	18

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
DENVER COL	54 57												
NUMBER OF SAMPLES		9	8	3	7	3	13	13	11	11	7	10	8
MAXIMUM		100	49	339	46	57	214	1063	116	1592	631	63	48
AVERAGE		25	13	126	24	28	57	145	24	198	123	14	27
MINIMUM		1	1	18	1	10	8	3	2	2	2	2	16
BOISE IDAHO	57												
NUMBER OF SAMPLES						3	2	2	3	2	2	2	1
MAXIMUM						140	30	1423	42	453	36	20	6
AVERAGE						75	23	778	30	294	25	17	6
MINIMUM						7	17	133	21	136	15	14	6
HELENA MONTANA	57												
NUMBER OF SAMPLES						3	2	2	2	2	3	1	3
MAXIMUM						89	33	241	37	82	30	8	27
AVERAGE						58	20	137	24	54	17	8	19
MINIMUM						28	7	33	12	26	8	8	12
SALT LAKE CITY UTAH	53 57												
NUMBER OF SAMPLES		8	7	3	1	8	7	6	9	8	3	7	9
MAXIMUM		48	46	1800	55	4255	37	88	64350	160	53	170	77
AVERAGE		17	11	617	55	608	15	36	6061	43	29	46	27
MINIMUM		1		25	55	31	4	4	2	3	3	4	
CHEYENNE WYO	57												
NUMBER OF SAMPLES		1	1	1	2	1	3	3	2	2	2	2	3
MAXIMUM		49	22	12	37	2	75	1560	242	361	2337	21	49
AVERAGE		49	22	12	22	2	49	1071	144	221	1273	11	35
MINIMUM		49	22	12	8	2	14	592	47	82	210	2	25
ANCHORAGE ALASKA	53 57												
NUMBER OF SAMPLES		6	8	7	8	9	10	7	7	12	7	13	10
MAXIMUM		11	11	10	20	16	14	40	7	110	14	43	15
AVERAGE		2	3	3	5	4	3	9	1	21	8	15	5
MINIMUM								1			2	1	
PHOENIX ARIZ	57												
NUMBER OF SAMPLES						3	2	2	2	2	3	2	2
MAXIMUM						75	30	3691	51	143	7319	64	32
AVERAGE						61	27	1984	36	131	2458	50	23
MINIMUM						50	25	277	22	120	19	36	15
LOS ANGELES CALIF	54 57												
NUMBER OF SAMPLES			1	6	5	8	4	4	2	1		2	1
MAXIMUM			1	26	73	69	15	273	16	33		25	29
AVERAGE			1	7	15	23	7	78	14	33		22	29
MINIMUM			1		1	1	2	6	12	33		19	29
SAN FRANCISCO CALIF	55 57												
NUMBER OF SAMPLES		1				6	5	4	5	4	2	1	3
MAXIMUM		30				33	10	7	9	69	16	15	56
AVERAGE		30				16	6	5	3	37	13	15	34
MINIMUM		30				7	1			20	10	15	7
PASADENA CALIF	53 57												
NUMBER OF SAMPLES		9	8	9	8	9	9	8	6	6	7	5	6
MAXIMUM		56	43	29	60	82	9	8	9	49	37	20	47
AVERAGE		23	9	9	16	20	4	4	4	21	28	8	13
MINIMUM		2	1	1		6	1	3	2	2	6	1	
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5	4	7	3	4	3	2	3	4	5	4
MAXIMUM		5	25	19	9	4	2	2	1	40	24	51	40
AVERAGE		2	6	7	4	1	1	1		17	16	25	15
MINIMUM		1						1		3	10	8	6
SAN JOSE CALIF	54 57												
NUMBER OF SAMPLES		5	4	10	7	9	10	8	10	10	8	9	5
MAXIMUM		4	11	25	23	18	15	14	17	110	34	35	68
AVERAGE		2	4	9	9	7	6	4	4	34	26	17	20
MINIMUM		1	1	1		1	1	1	1	1	17	5	4
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		5	3	3	3	2	3	4	8	2	1	1	4
MAXIMUM		37	42	27	17	28	4	112	11	48	34	2	40
AVERAGE		24	20	15	13	26	2	30	3	26	34	2	15
MINIMUM			9	4	5	24	1	1	1	4	34	2	2
SAN DIEGO CALIF	57												
NUMBER OF SAMPLES		1	2	1	1	3	1	3	3	1	2	3	2
MAXIMUM		14	17	33	65	59	23	43	19	86	46	19	17
AVERAGE		14	15	33	65	26	23	23	14	86	42	14	15
MINIMUM		14	14	33	65	8	23	12	11	86	38	10	13
BURBANK CALIF	57												
NUMBER OF SAMPLES		1	1			2	2	2	3	1	2	4	1
MAXIMUM		10	21			25	13	50	35	36	36	19	16
AVERAGE		10	21			14	8	37	29	36	27	14	16
MINIMUM		10	21			3	4	24	22	36	19	11	16
SAN BERNARDINO CALIF	57												
NUMBER OF SAMPLES			1	1		2	3	5	1	1	1	2	1
MAXIMUM			8	55		40	3500	64	41	113	19	20	19
AVERAGE			8	55		29	1186	58	41	113	19	19	19
MINIMUM			8	55		18	21	49	41	113	19	19	19

TABLE 4. RADIOACTIVITY—URBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10^{1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
HONOLULU HAWAII	56 57												
NUMBER OF SAMPLES		1	2	2	2	5	7	6	6	5	4	6	3
MAXIMUM		6	30	37	27	47	36	52	38	48	38	25	24
AVERAGE		6	17	30	17	24	13	30	14	21	19	9	11
MINIMUM		6	4	23	8	5	4	5	3	2	6	4	3
LAS VEGAS NEVADA	57												
NUMBER OF SAMPLES						2	3	2	2	3	2	2	2
MAXIMUM						42	3800	250	29	546	44	36	28
AVERAGE						40	2082	152	27	334	36	25	22
MINIMUM						38	18	55	25	98	28	15	17
PORTLAND OREGON	53 57												
NUMBER OF SAMPLES		13	7	17	9	10	10	13	11	11	35	23	16
MAXIMUM		32	11	188	18	31	16	35	11	57	43	185	19
AVERAGE		4	2	18	7	8	4	5	3	25	12	37	4
MINIMUM					1	1			1	1			
SEATTLE WASH	57												
NUMBER OF SAMPLES		3	1	1	2	3	2	2	2	3	2	1	2
MAXIMUM		21	16	4	10	30	16	8	7	79	27	8	12
AVERAGE		12	16	4	6	19	10	5	5	31	23	8	9
MINIMUM		2	16	4	3	9	4	3	4	2	19	8	6

TABLE 4. RADIOACTIVITY—SUBURBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	55 56												
NUMBER OF SAMPLES			1	1	1	6	4	6	4	3	2		
MAXIMUM			6	7	2	13	6	15	2	85	16		
AVERAGE			6	7	2	7	3	5	1	43	8		
MINIMUM			6	7	2	2	1	1	1	18			
KANAWHA CO W VA	54 56												
NUMBER OF SAMPLES		3	5	2	2	5	5	6	4	6	2	4	2
MAXIMUM		46	60	10	20	35	20	9	4	30	10	16	34
AVERAGE		18	21	9	11	12	7	5	2	9	8	11	22
MINIMUM		4	3	9	3	1	1	2	1	3	7	6	11
HILLSBOROUGH CO FLA	53 56												
NUMBER OF SAMPLES		7	7	10	10	5	2	7	7	5	6	3	6
MAXIMUM		4	10	37	31	613	15	21	14	14	29	39	40
AVERAGE		1	4	13	10	131	11	5	4	5	12	29	10
MINIMUM				1	1	7	8	1	1		2	23	
FULTON CO GEORGIA	53 55												
NUMBER OF SAMPLES		5	8	9	9	5	5	8	6	3	4	2	4
MAXIMUM		8	24	14	43	531	8	8	10	36	31	19	55
AVERAGE		3	4	8	13	120	5	3	5	17	14	17	15
MINIMUM				1	2	4	3	1	1	6	1	15	
HAMILTON COUNTY OHIO	53 55												
NUMBER OF SAMPLES		6	7	10	3	5	3	4	4	4	4	6	7
MAXIMUM		9	11	9	5	23	9	6	3	4	9	10	15
AVERAGE		2	2	2	3	5	5	3	2	2	6	4	4
MINIMUM				1	1		1	2	1	2	2	1	
TONKA BAY MINN	53 54												
NUMBER OF SAMPLES		3	4	4	4	4	4	3		4	4	6	4
MAXIMUM		2	1	13	3	4	4	4		9	8	23	1
AVERAGE		1		3	1	2	3	2		2	5	10	
MINIMUM		1				1	2				1	2	
EDINA MINN	54 55												
NUMBER OF SAMPLES		3	3	3	1	1	3					1	4
MAXIMUM		8	5	10	12	34	70					18	14
AVERAGE		5	3	10	12	34	33					18	10
MINIMUM		3	2	10	12	34	9					18	5
DENVER COUNTY COLO	54 56												
NUMBER OF SAMPLES		4	3	10	2	6	5	4	6	6	7	4	5
MAXIMUM		32	30	517	20	80	41	172	14	50	66	61	56
AVERAGE		12	14	118	14	33	21	72	6	14	20	39	28
MINIMUM		4	4	11	8	11	12	7	1	2		11	11
SALT LAKE CO UTAH	53 55												
NUMBER OF SAMPLES		6	2	4	2	1	6	9	5	3	2	5	5
MAXIMUM		11	1	26437	31	17	32	17	13	30	58	170	56
AVERAGE		4	1	10648	29	17	16	9	5	15	31	67	18
MINIMUM		1	1	6	27	17	7	3	2	5	5	20	
MULTNOMAH CNTY ORE	54 55												
NUMBER OF SAMPLES			1	1		2		3		1	6	5	
MAXIMUM			4			1		2		2	23	116	
AVERAGE			4			1		1		2	12	50	
MINIMUM			4			1		1		2	6	2	

TABLE 4. RADIOACTIVITY—NONURBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10^{1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LITCHFIELD CNTY CONN	55 56												
NUMBER OF SAMPLES		3				2	1		1			1	3
MAXIMUM		10				20	7		5			3	21
AVERAGE		5				15	7		5			3	15
MINIMUM						11	7		5			3	4
ACADIA NATNL PARK ME	57												
NUMBER OF SAMPLES						2	1	3	2	2	1	3	2
MAXIMUM						27	32	7	12	22	24	28	10
AVERAGE						25	32	5	11	19	24	17	6
MINIMUM						23	32	4	11	17	24	7	2
MT MANSFIELD FRST VT	57												
NUMBER OF SAMPLES									2	2	1	2	
MAXIMUM									60	189	102	20	
AVERAGE									35	111	102	14	
MINIMUM									10	34	102	8	
WORCESTER COUNTY MD	57												
NUMBER OF SAMPLES								5	4	4	3	5	3
MAXIMUM								48	70	374	41	26	16
AVERAGE								22	28	109	24	16	12
MINIMUM								5	5	16	12	8	7
CAPE HATTERAS NC	57												
NUMBER OF SAMPLES								2	1		2	2	1
MAXIMUM								14	17		55	15	18
AVERAGE								13	17		32	14	18
MINIMUM								13	17		10	13	18
SHENANDOAH PARK VA	57												
NUMBER OF SAMPLES						3	4	3	3	3	3	4	2
MAXIMUM						42	338	65	654	150	48	53	13
AVERAGE						24	100	36	245	89	33	29	11
MINIMUM						11	8	21	25	14	24	14	9
HOLLY RIVER PK W VA	57												
NUMBER OF SAMPLES						2	3	4	4	4	3	3	2
MAXIMUM						24	55	55	710	73	82	21	17
AVERAGE						14	40	40	201	42	43	13	14
MINIMUM						4	25	22	17	8	10	3	11
GULF SHORES PARK ALA	57												
NUMBER OF SAMPLES											4	4	4
MAXIMUM											126	17	22
AVERAGE											76	14	16
MINIMUM											44	6	12
FLORIDA KEYS FLORIDA	57												
NUMBER OF SAMPLES									1	4	3	3	3
MAXIMUM									81	87	174	22	24
AVERAGE									81	53	130	13	18
MINIMUM									81	25	71	8	10
OATLAND ISLAND GA	57												
NUMBER OF SAMPLES						2	2	2	2	1	3	2	2
MAXIMUM						28	40	54	22	28	43	7	18
AVERAGE						19	28	36	16	28	28	6	14
MINIMUM						11	16	18	11	28	4	6	11
JACKSON COUNTY MISS	57												
NUMBER OF SAMPLES									4	3	5	3	5
MAXIMUM									40	1129	894	15	26
AVERAGE									23	386	267	11	18
MINIMUM									16	11	24	9	14
FT DONELSON TENN	57												
NUMBER OF SAMPLES						2	2	3	2	2	2	2	1
MAXIMUM						47	17	353	43	289	62	21	10
AVERAGE						29	13	182	33	158	60	16	10
MINIMUM						11	9	26	23	28	58	12	10
SANGAMON COUNTY ILL	57												
NUMBER OF SAMPLES						1	2	2	2	2	1	2	1
MAXIMUM						23	24	22	19	87	24	25	25
AVERAGE						23	23	18	16	62	24	19	25
MINIMUM						23	22	14	14	37	24	13	25
HURON COUNTY MICH	57												
NUMBER OF SAMPLES						1	4	4	4	4	5	4	4
MAXIMUM						17	20	219	15	226	96	23	12
AVERAGE						17	15	74	11	82	52	13	8
MINIMUM						17	12	9	8	15	22	7	5
PERRYS MEMORIAL OHIO	57												
NUMBER OF SAMPLES											2	2	4
MAXIMUM											64	12	17
AVERAGE											55	11	12
MINIMUM											47	11	5
ELLIS COUNTY KANSAS	57												
NUMBER OF SAMPLES						1	1	2	2	1	2		2
MAXIMUM						21	86	62	1316	83	51		36
AVERAGE						21	86	59	670	83	28		22
MINIMUM						21	86	57	24	83	5		8
COOK COUNTY MINN	57												
NUMBER OF SAMPLES						2	2	1	3	2		2	2
MAXIMUM						28	18	122	20	45		15	14
AVERAGE						20	15	122	13	30		14	12
MINIMUM						13	12	122	9	16		13	10

TABLE 4. RADIOACTIVITY—NONURBAN STATIONS

(MICROMICROCURIES PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SHANNON COUNTY MO	57												
NUMBER OF SAMPLES									1	4	4	4	5
MAXIMUM									100	239	113	29	26
AVERAGE									100	89	62	17	17
MINIMUM									100	31	19	8	12
THOMAS COUNTY NEBR	57												
NUMBER OF SAMPLES										2	4	2	3
MAXIMUM										142	123	9	560
AVERAGE										100	47	8	201
MINIMUM										59	3	7	19
WARD COUNTY N D	57												
NUMBER OF SAMPLES											4	4	5
MAXIMUM											36	14	16
AVERAGE											19	7	9
MINIMUM											5	5	4
BLACK HILLS FRST S D	57												
NUMBER OF SAMPLES											2	1	2
MAXIMUM											730	17	27
AVERAGE											381	17	21
MINIMUM											33	17	15
PT WORONZOF ALASKA	56 57												
NUMBER OF SAMPLES		1	3		4	5	4	3	4	4	4	6	7
MAXIMUM		34	38		26	18	4	4	2	26	10	12	8
AVERAGE		34	18		11	5	2	2	1	20	8	8	7
MINIMUM		34	4		5		1	1	1	10	4	2	4
GRAND CANYON ARIZ	57												
NUMBER OF SAMPLES							2	3	3	4	5	4	5
MAXIMUM							154	558	135	830	350	51	35
AVERAGE							87	362	84	322	99	24	21
MINIMUM							21	130	23	42	8	15	7
WAIMANOLO HAWAII	57												
NUMBER OF SAMPLES		1	2	2	2	2	2	2	2	2	2	2	1
MAXIMUM		18	17	9	34	34	19	5	4	86	72	5	9
AVERAGE		18	16	8	20	25	12	4	3	58	41	3	9
MINIMUM		18	16	7	7	17	6	4	3	31	10	2	9

TABLE 5. CHLORIDES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	1	13	4	1	2	2	3	3	4	5	6	11
	1	56	22	1	13	3		1	1	1	2	2	3	6	9
	1	55 56	36	1	13	4		1	1	2	2	3	4	6	9
BOSTON MASS	1	55	23		6	3		1	2	2	3	3	3	4	5
EVERETT MASS	1	55	26	1	34	3		1	1	1	2	2	3	3	4
ELIZABETH N J	1	55 56	21		6	1			1	1	1	1	2	3	5
PAULSBORO N J	1	55 56	25		16	2				1	1	1	1	1	5
CAMDEN N J	1	55 56	21		7	1				1	1	1	1	2	3
PERTH AMBOY N J	1	55 56	23		4						1	1	1	1	2
TRENTON N J	1	55 56	17		6	2		1	1	2	2	3	3	3	4
JERSEY CITY N J	1	55 56	23		8	1				1	1	1	1	1	2
NEW YORK N Y	2	54	18	4	92	19	4	5	8	10	11	15	17	19	34
	2	55	21	2	43	12	2	2	3	4	6	8	9	27	34
	2	56	3	6	57	30		6	6	6	30	30	30	30	61
	2	54 56	42	2	92	16	2	3	5	6	9	11	16	29	38
	3	54 55	18	1	3	1				1	1	1	1	2	2
		54	19	1	92	18	3	4	8	10	11	13	16	19	34
		55	38	1	43	7		1	1	2	2	3	5	8	27
		56	3	6	57	30		6	6	6	30	30	30	30	61
		54 56	60	1	92	12	1	1	2	3	4	8	10	17	32
PHILADELPHIA PA	1	54	65		21	4	1	1	2	2	3	3	4	6	13
	1	55	281		30	3		1	1	2	2	2	3	4	6
	1	54 56	347		30	3		1	1	2	2	3	3	4	6
ALTOONA PA	1	56	13	1	6	3	1	2	2	2	3	3	3	4	5
BRISTOL PA	1	55 56	18		3	1				1	1	1	2	2	2
CHESTER PA	1	55 56	18		9	1				1	1	1	1	2	4
ERIE PA	1	56	25		7	1		1	1	1	1	1	2	2	3
PITTSBURGH PA	1	56	21	1	11	2	1	1	2	2	2	3	3	3	4
WILLIAMSPORT PA	1	55 56	23	1	5	2		1	1	2	2	2	3	3	4
WASHINGTON DC	1	54	16	1	19	8	4	4	5	5	7	8	9	11	12
	2	55	18	1	20	3				1	1	1	1	2	15
	2	56	2	1	2	1			1	1	1	1	1	2	2
	2	55 56	20	1	20	3				1	1	1	1	2	15
		54	16	1	19	8	4	4	5	5	7	8	9	11	12
		55	18	1	20	3				1	1	1	1	2	15
		56	2	1	2	1			1	1	1	1	1	2	2
		54 56	36	1	20	5			1	1	2	5	7	10	15
LOUISVILLE KY	1	54	17	2	50	21	3	3	6	12	19	26	30	36	38
	1	55	21		29	10	1	1	2	3	8	9	15	20	24
	1	54 55	38		50	15	1	2	3	6	9	17	21	27	34
	2	54	13		29	9	1	3	6	6	7	8	8	15	19
	2	55	10		18	5		1	1	2	3	3	3	4	17
	2	54 55	23		29	7		1	2	3	6	7	8	15	18
		54	31		50	15	1	3	5	7	8	17	19	29	36
		55	31		29	8	1	1	2	3	4	8	11	18	21
		54 55	62		50	12	1	2	3	5	7	9	17	21	29
CHARLESTON W VA	4	55	16		17	3	1	1	2	2	2	3	3	4	6
TAMPA FLA	1	55	21	1	21	6	2	2	3	3	5	7	8	10	12
ATLANTA GA	1	55 56	16		35	3			1	1	1	1	1	2	6
CHATTANOOGA TENN	3	55	14		3	1			1	1	1	1	2	2	3
	4	55 56	18	1	19	4	1	2	2	3	3	4	5	6	8
		55 56	32		19	3		1	1	1	2	2	3	5	7
CHICAGO ILL	1	55	28	1	49	7	1	2	2	2	3	4	5	8	15
	2	54	25	3	215	38	6	7	14	23	29	31	41	48	88
	2	55	26	1	134	24	2	3	4	5	7	11	15	24	69
	2	54 55	51	1	215	31	3	4	6	8	15	23	31	48	78
	4	55	29	1	17	5	1	2	2	3	4	4	5	8	11
		54	25	3	215	38	6	7	14	23	29	31	41	48	88
		55	83	1	134	12	1	2	2	3	4	5	7	11	21
		54 55	108	1	215	18	1	2	3	4	6	8	14	23	48
EAST ST LOUIS ILL	1	55 56	15	2	11	7	3	4	6	6	8	8	9	9	10
	2	55 56	14	1	15	4	1	2	2	3	4	4	5	5	7
		55 56	29	1	15	5	1	2	3	4	5	6	7	8	9

TABLE 5. CHLORIDES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻¹											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55 56	19	2	22	9	2	5	6	7	8	8	11	15	21
	2	55 56	26	1	50	11	3	4	5	6	7	11	12	16	19
	3	55 56	21	1	32	6	1	1	2	2	4	5	6	7	11
	4	55 56	20	1	35	8	1	2	3	4	5	6	7	13	17
		55	67	1	50	9	2	3	4	5	6	7	10	15	20
		56	19	1	32	7	1	1	2	2	4	5	7	13	15
		55 56	86	1	50	9	1	2	4	5	6	7	9	14	19
CINCINNATI OHIO	1	54	36	4	72	20	5	7	10	14	16	18	21	32	38
	1	55	27		39	9	1	1	2	4	6	8	14	16	19
	1	54 55	63		72	15	2	4	6	9	13	15	17	21	37
MINNEAPOLIS MINN	1	54 55	21		20	3			1	1	1	2	2	4	10
KANSAS CITY MO	2	55 56	18		18	4	1	2	2	3	3	4	5	6	9
	4	55 56	9		2	1			1	1	1	1	1	1	2
		55 56	27		18	3		1	1	2	2	3	3	5	6
ST LOUIS MO	1	55 56	25	2	23	5	2	2	3	3	3	4	5	7	9
NEW ORLEANS LA	1	54 55	23	3	39	9	2	3	4	5	7	9	10	12	15
	2	54 55	22	1	29	5	1	1	2	3	3	4	5	7	8
		54 55	45	1	39	7	2	2	3	3	5	6	8	10	14
FT WORTH TEXAS	1	54	12	1	10	4	1	1	3	3	3	4	4	5	6
	1	55	16	2	8	2	1	1	2	2	2	2	2	3	4
	1	54 55	28	1	10	3	1	1	2	2	2	3	4	4	6
HOUSTON TEXAS	1	54	14	2	15	8	2	5	6	7	8	8	9	11	13
	1	55	56	1	31	8	2	3	4	5	7	8	10	11	16
	1	54 55	70	1	31	8	2	3	4	6	7	8	10	11	15
BELLAIRE TEXAS	1	54	17	1	15	5	1	2	3	4	5	5	6	7	10
	1	55	24		19	7	1	2	3	4	5	7	9	11	18
	1	54 55	41		19	6	1	2	3	4	5	6	8	10	15
DENVER COL	1	54 55	26		13	4	1	2	3	3	4	4	5	6	7
SALT LAKE CITY UTAH	2*	54 55	26		33	4	1	1	1	2	2	5	3	5	9
ANCHORAGE ALASKA	1	54 55	26	1	23	4		1	2	2	3	4	4	7	10
LOS ANGELES CALIF	1	54	3	10	73	31		10	10	10	11	11	11	11	78
SAN FRANCISCO CALIF	1	55 56	32	3	432	87	5	8	26	56	78	94	118	131	141
PASADENA CALIF	1	54	15	2	30	11	4	4	5	6	10	10	13	19	24
	1	55	35		11	2		1	1	1	2	2	3	5	8
	1	56	4	2	9	5		2	2	3	3	3	8	8	9
	1	54 56	54		30	5		1	1	2	3	4	6	9	11
BERKELEY CALIF	1	54 55	28	6	76	22	9	11	12	17	19	21	25	27	34
SAN JOSE CALIF	1	54	20	2	28	9	3	4	5	5	7	9	11	13	15
	1	55	12	3	15	5	2	3	3	4	4	5	5	6	11
	1	56	20	1	16	4		1	1	2	4	4	5	7	9
	1	54 56	52	1	28	6	1	2	3	4	5	5	7	10	14
SAN LEANDRO CALIF	1	55 56	30	1	29	9	2	3	4	5	7	8	11	14	16
PORTLAND OREGON	1	54	11	3	37	14	3	3	6	7	9	11	17	30	34
	1	55	19		10	3		1	1	2	3	3	5	6	9
	1	54 55	30		37	7		1	2	3	5	6	7	9	17
	2	54	10	1	43	19	1	4	9	10	11	21	24	38	41
	5	54	10	3	24	11	3	5	5	8	9	11	13	15	23
	4	54	10	6	41	24	6	7	9	19	21	30	34	38	41
		54	41	1	43	17	3	6	7	9	11	19	23	32	38
		55	19		10	3		1	1	2	3	3	5	6	9
		54 55	60		43	13	1	2	5	6	8	9	15	23	35

TABLE 5. CHLORIDES—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36	1	13	4		1	1	2	2	3	4	6	9
MASSACHUSETS TOTAL	55	49		34	3		1	1	2	2	3	3	4	4
NEW JERSEY TOTAL	55 56	130		16	1				1	1	1	1	2	3
NEW YORK TOTAL	54 56	60	1	92	12	1	1	2	3	4	8	10	17	32
PENNSYLVANIA TOTAL	54 56	465		30	3		1	1	2	2	2	3	4	6
DIS COLUMBIA TOTAL	54 56	36	1	20	5			1	1	2	5	7	10	15
KENTUCKY TOTAL	54 55	62		50	12	1	2	3	5	7	9	17	21	29
WEST VIRGINA TOTAL	55	16		17	3	1	1	2	2	2	3	3	4	6
FLORIDA TOTAL	55	21	1	21	6	2	2	3	3	5	7	8	10	12
GEORGIA TOTAL	55 56	16		35	3			1	1	1	1	1	2	6
TENNESSEE TOTAL	55 56	32		19	3		1	1	1	2	2	3	5	7
ILLINOIS TOTAL	54 56	137	1	215	15	1	2	3	4	5	7	10	16	41
INDIANA TOTAL	55 56	86	1	50	9	1	2	4	5	6	7	9	14	19
OHIO TOTAL	54 55	63		72	15	2	4	6	9	13	15	17	21	37
MINNESOTA TOTAL	54 55	21		20	3			1	1	1	2	2	4	10
MISSOURI TOTAL	55 56	52		23	4	1	1	2	2	3	3	4	6	8
LOUISIANA TOTAL	54 55	45	1	39	7	2	2	3	3	5	6	8	10	14
TEXAS TOTAL	54 55	139		31	6	1	2	3	4	5	6	8	10	14
COLORADO TOTAL	54 55	26		13	4	1	2	3	3	4	4	5	6	7
UTAH TOTAL	54 55	26		33	4	1	1	1	2	2	3	3	5	9
ALASKA TOTAL	54 55	37		23	3			1	1	2	3	3	6	9
CALIFORNIA TOTAL	54 56	199		432	22	1	2	4	5	7	10	13	22	59
OREGON TOTAL	54 55	60		43	13	1	2	5	6	8	9	15	23	35
NEW ENGLND TOTAL	55 56	85		34	3		1	1	2	2	3	3	4	8
MID ATLNTC TOTAL	54 56	655		92	3		1	1	1	2	2	3	4	6
MID EAST TOTAL	54 56	114		50	8		1	2	3	4	7	10	17	24
SOUTH EAST TOTAL	55 56	69		35	4		1	1	2	2	3	4	7	10
MID WEST TOTAL	54 56	286		215	13	1	2	4	5	6	8	13	17	32
GRT PLAINS TOTAL	54 56	73		23	3		1	1	2	2	3	4	5	9
GULF SOUTH TOTAL	54 55	184		39	7	1	2	3	4	5	6	8	10	14
ROCKY MNTN TOTAL	54 55	52		33	4	1	1	2	2	3	3	4	6	9
PAC COAST TOTAL	54 56	296		432	18	1	2	3	5	6	9	12	20	35
GRAND TOTAL	54 56	1814		432	8		1	2	2	3	4	6	9	17

TABLE 5. CHLORIDES—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23	1	7	2	1	1	1	2	2	2	2	3	4
LAKEHURST N J	1	55 56	19		7	2			1	1	2	2	3	3	4
KANAWHA CO W VA	1	55	17	1	4	2		1	1	1	2	2	3	3	4
HAMILTON COUNTY OHIO	1	54 55	21	1	22	4	1	1	2	2	3	3	4	4	6
DENVER COUNTY COLO	1	54 55	10		3	1			1	1	1	2	2	2	3
MULTNOMAH CNTY ORE	1	54	10	1	10	4		1	1	2	3	4	5	6	7
GRAND TOTAL		54 56	100		22	2		1	1	1	2	2	3	3	5
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		3							1	1	1	1

TABLE 5. CHLORIDES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		4	8	8	11	6	3	1	5	2	13	13	13
AVERAGE		3	4	4	5	3	2	1	3	2	4	5	11
MINIMUM		2	1	1	3	1	1	1	1	2	1	1	9
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		5	6	3	3	2	4	2	4	3	5	4	4
AVERAGE		5	5	1	3	2	2	2	3	3	4	3	4
MINIMUM		5	4		3	2	1	2	1	3	4	3	4
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		3	4	1	1	4	4	4	2	3	34	12	3
AVERACE		2	3	1	1	3	2	2	2	2	34	12	2
MINIMUM		2	3	1	1	2	1	2	2	2	34	12	1
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		6		1	3	1		1	3	5		2	5
AVERAGE		3			1	1		1	1	5		2	4
MINIMUM		2				1		1		5		2	3
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		1	1	16	11	1	1	1	3		2		1
AVERAGE		1	1	7	3		1	1	3		1		1
MINIMUM		1	1	1	1		1	1	3		1		1
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		1	3	7	4		1		1	3	2		2
AVERAGE		1	1	3	3		1			1	1		1
MINIMUM		1	1	1	2		1						1
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM				2	4			1			1		
AVERAGE				1	1			1					
MINIMUM				1				1					
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		3	4	3	6			3			3	3	4
AVERAGE		2	2	3	6			2			3	3	3
MINIMUM		2	1	3	6			1			3	3	2
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		1	1	3	8		1	2	2				1
AVERAGE		1	1	1	2			1	2				1
MINIMUM		1	1	1	1				2				1
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		3	4	1	4	1	9	7	5	6	6	7	7
MAXIMUM		57	38	2	4	3	28	31	43	33	17	6	92
AVERAGE		24	18	2	2	3	8	8	12	14	10	3	28
MINIMUM		8	2	2	1	3	1	1	1	5	1	1	1
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		14	24	28	25	16	22	30	30	31	35	44	48
MAXIMUM		12	22	5	8	5	6	30	17	14	11	18	22
AVERAGE		4	3	2	2	2	1	3	3	4	3	3	4
MINIMUM		1			1					1			
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			6	5	3	4			3	4	3	2	
AVERAGE			6	5	3	3			3	2	3	2	
MINIMUM			6	5	3	3			3	1	3	2	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM						2		3	2	3	1	3	
AVERAGE						1		2	3	1		1	
MINIMUM						1		2	2				
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			4		1	1	2		9	5	1		2
AVERAGE			4		1		1		3	1	1		2
MINIMUM			4		1						1		2
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		6		2	2	2	2	7		1	2	2	2
AVERAGE		3		1	1	2	2	7			1	2	1
MINIMUM		1		1		2	2	7			1	2	1
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		3	3	4			11	3		3	3	4	3
AVERAGE		2	2	3			4	2		3	2	3	3
MINIMUM		2	2	3			1	1		3	1	2	3

TABLE 5. CHLORIDES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁴

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			4	3	5	3	3	3	2	2	5	3	3
AVERAGE			3	3	5	2	2	3	2	1	4	1	2
MINIMUM			2	3	5	2	1	3	2	1	4	1	2
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	5		1	3	5	4	7	6	3	1	
MAXIMUM		1	20		1	1	5	7	12	19	11	1	
AVERAGE		1	11		1	1	3	3	5	9	7	1	
MINIMUM		1	1		1	1	1	1	1	1	2	1	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	1	1	3	13	13	18	6	1	6
MAXIMUM		20	19	29	20	2	48	30	50	17	18	15	32
AVERAGE		19	15	29	20	2	17	9	13	5	11	15	19
MINIMUM		18	10	29	20	2	1				3	15	6
CHARLESTON W VA	55												
NUMBER OF SAMPLES			1	1		2	2	2	1	1	3	2	1
MAXIMUM			4	3		6	2	2	3	2	10	3	17
AVERAGE			4	3		4	1	1	3	2	5	2	17
MINIMUM			4	3		2	1		3	2	2	2	17
TAMPA FLA	55												
NUMBER OF SAMPLES		2	1	1	3	2	1	2	2	3	1	2	1
MAXIMUM		21	8	10	12	12	3	7	4	3	8	3	10
AVERAGE		15	8	10	6	9	3	6	3	2	8	3	10
MINIMUM		10	8	10	3	7	3	5	2	1	8	3	10
ATLANTA GA	55 56												
NUMBER OF SAMPLES		1	1	3	2	1	1	3	1		1	1	1
MAXIMUM		1		2	1	35		2			9	6	1
AVERAGE		1		1		35		1			9	6	1
MINIMUM		1				35					9	6	1
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM		5	10	4	1	3		4	2	6	8	3	19
AVERAGE		5	3	3		2		4	1	3	3	2	10
MINIMUM		5		3		2		4		1	2	1	1
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	8	12	14	9	8	16	13	8
MAXIMUM		78	134	46	4	20	15	43	15	31	88	50	215
AVERAGE		27	59	12	2	6	4	7	6	16	21	10	60
MINIMUM		2	4	2	1	2	2	1	1	1	2	1	3
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		8	5	11	9	15	5	9	7	9	1	5	11
AVERAGE		5	3	7	8	9	3	9	5	4	1	4	8
MINIMUM		2	2	4	7	3	2	9	4	2	1	4	5
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		32	6	22	35	33	50	16	7	12	13	7	22
AVERAGE		8	3	10	15	20	16	7	4	4	7	4	8
MINIMUM		1	1	1	4	7	5	3	1	2	4	2	3
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	5	8	9	12	8	3	6
MAXIMUM		16	39	13	14	5	18	10	22	33	45	20	72
AVERAGE		7	23	9	9	3	10	6	9	17	24	12	40
MINIMUM		3	15	6	4	2	3	2		2	7	1	1
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	1	1	1		2		5	4	3	2	1
MAXIMUM		1		1	1		1		20	6	10	3	2
AVERAGE		1		1	1				6	3	5	1	2
MINIMUM		1		1	1					2	1		2
KANSAS CITY MO	55 56												
NUMBER OF SAMPLES		4	2	3	3	3	2	2	4	1	1	1	1
MAXIMUM		9	6	9	3	3	3	2	4	1		6	18
AVERAGE		4	5	5	2	1	1	1	2	1		6	18
MINIMUM		2	5	4	1				1	1		6	18
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		3	3	2	2	3	1	2	3	2
MAXIMUM		4	10		7	5	23	4	5	8	4	4	7
AVERAGE		3	9		4	3	12	3	4	8	3	3	5
MINIMUM		3	9		2	2	2	3	4	8	3	2	3
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	4	4	6	4	4	3	5	3
MAXIMUM		5	11	19	39	9	5	29	15	10	12	15	9
AVERAGE		4	6	10	17	4	3	9	6	5	6	6	8
MINIMUM		3	3	5	5	2	1	2	2	1	3	1	7
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	3	3	2	2	2	2	2	2	3	2	3
MAXIMUM		8	2	4	6	2	3	3	10	4	4	4	5
AVERAGE		5	2	2	4	2	2	2	8	4	2	3	3
MINIMUM		3	2	2	2	2	2	2	6	4	1	2	1

TABLE 5. CHLORIDES—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			5	6	4	5	12	7	3	6	6	9	7
MAXIMUM			23	12	22	10	12	9	10	31	11	19	15
AVERAGE			9	8	14	5	6	6	5	12	9	9	8
MINIMUM			3	2	7	1	3	3	3	5	7	2	2
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	3	3	4	7	5	4	2	3
MAXIMUM		9	5	7	19	15	18	8	19	16	15	2	6
AVERAGE		4	3	5	14	7	11	4	5	8	10	1	4
MINIMUM		2	2	4	9	4	4	2		4	6	1	1
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		9	4	7	5	2	5	4	6	4	5	6	13
AVERAGE		6	2	6	4	1	2	3	5	4	4	6	10
MINIMUM		4		6	3	1	2	3	4	4	3	6	7
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	2	2	2	2	2	2	2	2	2	2	3
MAXIMUM		5	33	5	3	2	3	9	2	2	4	3	10
AVERAGE		1	21	3	2	1	2	5	2	2	2	3	6
MINIMUM			10	1	2		2	1	2	2		3	3
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	2	2	2		5	1	3	3	3	1	3
MAXIMUM		9	3	1	4		6	3	23	4	11	1	12
AVERAGE		9	2	1	2		4	3	9	3	6	1	7
MINIMUM		9	1	1	1		3	3	2	2	1	1	1
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		432	93	116	130	98	141	130	78	25	120	260	8
AVERAGE		209	63	87	130	55	136	58	68	16	106	96	8
MINIMUM		3	33	59	130	10	131	6	58	5	84	5	8
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		5	6	5	4	4	9	8	3	4	6		
MAXIMUM		11	9	10	5	2	8	18	6	22	30		
AVERAGE		6	4	3	2		4	8	4	6	12		
MINIMUM		2						2	4				
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	3				1	3	2	3	4	5	4
MAXIMUM		10	20				11	59	26	20	33	76	23
AVERAGE		8	17				11	46	21	19	25	28	16
MINIMUM		6	13				11	30	16	18	19	6	9
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	2		3	4	5	5	6	4	7	6
MAXIMUM		6	15	5		10	28	9	24	10	14	12	15
AVERAGE		4	6	4		4	13	3	8	6	8	6	6
MINIMUM		3	2	3		1	4	1	2	1	2	4	3
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		15	3	14	5	17	16	15	26	13	29	11	1
AVERAGE		7	3	7	5	17	11	9	12	13	14	7	1
MINIMUM		2	3	1	5	17	6	3	4	13	6	2	1
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		3	3	2		1	2	4	4	3	5	7	2
AVERAGE		2	3	1		1	1	3	3	2	5	5	2
MINIMUM		2	3	1		1	1	2	2	1	5	3	2
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM		4	4	3	1		5	3		1	7	3	3
AVERAGE		3	4	1			5	3			7	2	3
MINIMUM		2	4				5	3			7	1	3
KANAWHA CO W VA	55												
NUMBER OF SAMPLES		1	3	2		2	1	3	1		2	1	1
MAXIMUM		1	3	4		4	1	4	2		1	1	2
AVERAGE		1	2	3		4	1	2	2		1	1	2
MINIMUM		1	2	3		4	1	2	2		1	1	2
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1					3	4	4	4	3	2
MAXIMUM			6					3	8	3	4	4	22
AVERAGE			6					2	3	1	3	3	13
MINIMUM			6					1	1	1	3	3	5
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM				1	3					2	3	3	
AVERAGE				1	3					1	2	3	
MINIMUM				1	3					1	2	3	

TABLE 6. FLUORIDES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
NEW YORK N Y	2	54 55	21		160	57	12	24	34	43	54	61	74	88	99
WASHINGTON DC		54 55	19		110	45	11	23	30	36	41	43	54	65	78
CHICAGO ILL	2	54 55	31		392	123	1	34	58	78	97	141	155	179	335
CINCINNATI OHIO	1	54 55	40		211	35		1	10	19	26	29	33	43	105
HOUSTON TEXAS	1	54	7		43	17			1	1	15	15	34	38	38
ANCHORAGE ALASKA	1	54 55	12		28	5			1	1	1	1	3	15	21
PASADENA CALIF	1	54 55	20		87	23		1	1	1	10	27	32	36	69
BERKELEY CALIF	1	54 55	28		88	19		1	1	8	11	15	21	30	54
SAN JOSE CALIF	1	54 55	23		140	52	4	17	20	24	46	61	81	88	111
PORTLAND OREGON	1	54	10	7	164	77	7	7	41	43	48	88	99	150	159
	2	54	10	23	148	67	23	24	27	43	54	74	78	105	111
	4	54	10	14	406	185	15	99	111	169	179	190	201	226	322
	5	54	10		145	44	1	1	24	34	38	41	43	48	78
		54	40		406	93	7	24	39	43	72	94	111	159	190

TABLE 6. FLUORIDES—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW JERSEY TOTAL	55	10		70	39	1	19	20	21	34	54	56	59	61
NEW YORK TOTAL	54 55	21		160	57	12	24	34	43	54	61	74	88	99
DIS COLUMBIA TOTAL	54 55	19		110	45	11	23	30	36	41	43	54	65	78
ILLINOIS TOTAL	54 55	31		392	123	1	34	58	78	97	141	155	179	335
OHIO TOTAL	54 55	40		211	35		1	10	19	26	29	33	43	105
TEXAS TOTAL	54	7		43	17			1	1	15	15	34	38	38
ALASKA TOTAL	54 55	12		28	5			1	1	1	1	3	15	21
CALIFORNIA TOTAL	54 55	74		140	33		1	8	12	20	30	38	69	87
OREGON TOTAL	54	40		406	93	7	24	39	43	72	94	111	159	190
MID ATLNTC TOTAL	54 55	31		160	51	12	20	27	38	52	57	61	75	94
MID EAST TOTAL	54 55	19		110	45	11	23	30	36	41	43	54	65	78
MID WEST TOTAL	54 55	71		392	74	1	8	23	28	38	61	95	125	179
GULF SOUTH TOTAL	54	7		43	17			1	1	15	15	34	38	38
PAC COAST TOTAL	54 55	126		406	49		1	10	18	28	39	64	86	133
GRAND TOTAL	54 55	257		406	54	1	3	14	24	33	43	65	90	141

TABLE 6. FLUORIDES—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
HAMILTON COUNTY OHIO	1	54 55	22		60	22		1	1	10	15	30	34	48	52
MULTNOMAH CNTY ORE	1	54	10		174	41		1	1	6	11	17	43	88	99
GRAND TOTAL		54 55	34		174	27		1	1	10	15	27	40	48	61

TABLE 6. FLUORIDES—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
NEW YORK N Y	54 55												
NUMBER OF SAMPLES		2	1				2	3	1	4	3	3	2
MAXIMUM		96	47				55	73	59	37	160	95	109
AVERAGE		81	47				39	65	59	20	74	53	94
MINIMUM		66	47				24	52	59		13	27	79
WASHINGTON DC	54 55												
NUMBER OF SAMPLES			3				3	3	4	4	2		
MAXIMUM			110				80	50	75	67	24		
AVERAGE			46				65	37	50	43	17		
MINIMUM							48	24	32	21	10		
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		2	4				1	5	3	4	6	3	3
MAXIMUM		160	330				43	65	61	97	359	392	342
AVERAGE		155	182				43	31	24	80	166	231	160
MINIMUM		150	76				43			39	90	147	27
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		1	3		1		3	6	6	10	5	1	4
MAXIMUM		42	50		28		29	63	39	105	120		211
AVERAGE		42	34		28		9	13	27	24	40		131
MINIMUM		42	22		28				1		8		95
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	1				1		2	3	2		2
MAXIMUM		20	6							3			28
AVERAGE		20	6							1			21
MINIMUM		20	6										14
PASADENA CALIF	54 55												
NUMBER OF SAMPLES		2	3				3	4	2	2	4		
MAXIMUM		10	1					80	87	37	30		
AVERAGE		8						54	60	32	10		
MINIMUM		7						34	34	27			
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	3				2	3	1	3	4	5	4
MAXIMUM		32	22				88	33	14	20		84	49
AVERAGE		17	13				44	27	14	6		32	20
MINIMUM		10						19	14				8
SAN JOSE CALIF	54 55												
NUMBER OF SAMPLES		3	4				1	1		3	3	5	3
MAXIMUM		84	19				95	80		57	100	130	140
AVERAGE		42	10				95	80		27	70	70	62
MINIMUM		21					95	80		4	45	36	17
SUBURBAN													
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1					4	4	4	4	3	2
MAXIMUM			10					51	60	52	1	24	14
AVERAGE			10					32	43	33		11	7
MINIMUM			10						28				

TABLE 7. NITRATES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55 56	36	2	20	6	2	3	4	5	6	6	7	8	9
BOSTON MASS	1	55 57	25	1	38	7	1	2	4	4	5	6	7	10	13
EVERETT MASS	1	55	26	1	15	6	2	2	4	5	5	6	8	10	11
MANCHESTER N H	1	57	17	4	35	12	4	6	7	8	9	10	11	24	25
ELIZABETH N J	1	55 56	21	2	48	7	2	3	3	4	5	6	7	8	9
PAULSBORO N J	1	55 56	25	3	69	11	3	4	4	5	5	6	8	9	17
CAMDEN N J	1	55 56	21	2	66	11	4	4	5	5	6	6	7	8	12
PERTH AMBOY N J	1	55 56	23	2	49	9	3	4	4	4	5	8	9	9	12
TRENTON N J	1	55 56	17	5	46	14	5	6	7	7	13	14	18	21	22
JERSEY CITY N J	1	55 56	23	3	67	14	4	4	5	8	10	11	13	16	22
NEW YORK N Y	1	57	5	11	43	21	11	11	12	12	19	19	25	25	46
	2	54	18	10	74	30	17	21	22	24	26	28	32	34	46
	2	55	21	1	47	14	2	5	6	8	12	15	17	19	28
	2	56	3	2	15	7		2	2	2	5	5	5	5	15
	2	54 56	42	1	74	20	4	6	10	15	18	21	25	30	36
	3	54 55	18	1	14	5	1	1	1	2	4	5	7	9	12
		54	19	10	74	29	15	19	22	24	26	27	30	34	46
		55	38	1	47	10	1	2	4	5	7	9	12	15	19
		56	3	2	15	7		2	2	2	5	5	5	5	15
		57	5	11	43	21	11	11	12	12	19	19	25	25	46
		54 57	65	1	74	16	1	4	6	9	13	16	21	26	35
BUFFALO N Y	1	57	6	7	35	20	7	7	7	7	15	25	25	32	32
	2	57	13	4	35	19	4	7	7	17	20	21	22	33	35
		57	19	4	35	19	4	7	7	17	20	21	25	33	34
PHILADELPHIA PA	1	54	65	3	70	22	8	10	12	14	20	22	25	31	39
	1	55	281		83	19	8	10	12	14	17	19	22	26	31
	1	56	15	4	44	18	5	6	7	12	17	22	25	27	41
	1	54 56	361		83	19	7	10	12	14	17	20	22	27	32
	4	56	14	1	26	11	1	4	5	8	10	10	12	17	25
	4	57	2	10	19	14			10	10	10	10	10	19	19
	4	56 57	16	1	26	11	2	4	7	8	10	11	12	19	22
	5	56	14	1	43	17	1	3	8	11	12	21	25	28	36
	6	56	15	1	72	15	2	2	3	8	12	14	17	20	22
	7	56	14	1	43	16	1	2	4	7	11	12	19	28	41
		54	65	3	70	22	8	10	12	14	20	22	25	31	39
		55	281		83	19	8	10	12	14	17	19	22	26	31
		56	72	1	72	15	1	3	6	10	11	15	20	25	36
		57	2	10	19	14			10	10	10	10	10	19	19
		54 57	420		83	19	6	9	11	14	16	19	22	26	32
ALTOONA PA	1	56	13	4	16	7	4	4	5	5	7	7	7	8	13
BRISTOL PA	1	55 56	18	4	12	7	5	6	6	7	7	8	8	8	9
CHESTER PA	1	55 56	18	2	20	10	3	6	7	7	8	10	12	13	17
ERIE PA	1	56	25	2	14	6	3	5	5	6	6	7	7	8	10
PITTSBURGH PA	1	56	21	3	29	7	3	4	4	5	5	6	7	9	12
WILLIAMSPORT PA	1	55 56	23	3	29	10	4	7	8	8	10	11	12	13	17
WASHINGTON DC	1	54	16	7	77	33	14	15	21	22	31	39	41	46	52
	2	55 56	20	1	93	17	4	6	7	8	9	9	12	19	46
		54 56	36	1	93	24	6	7	9	10	15	21	31	43	49
LOUISVILLE KY	1	54	17	8	37	17	9	9	13	16	18	18	19	23	24
	1	55	21	9	47	23	12	14	16	17	21	24	28	34	36
	1	54 55	38	8	47	20	9	14	15	17	18	21	23	25	35
	2	54	13	4	27	12	4	7	7	8	11	12	13	14	25
	2	55	10	3	30	13	3	6	7	9	10	12	18	18	19
	2	54 55	23	3	30	12	4	7	7	9	11	12	14	18	25
	4	57	2	7	15	11			7	7	7	7	7	15	15
		54	31	4	37	15	7	8	9	11	14	16	18	22	24
		55	31	3	47	20	7	10	14	16	18	20	24	32	35
		57	2	7	15	11			7	7	7	7	7	15	15
		54 57	64	3	47	17	7	9	11	14	16	18	20	24	33
BALTIMORE MD	1	57	19	13	42	24	14	16	18	21	24	25	29	32	36
CHARLOTTE NC	1	57	25	5	37	14	7	8	11	11	14	15	18	20	22

TABLE 7. NITRATES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
NORFOLK VA	1	57	23	4	112	22	9	11	13	15	16	17	19	27	36
CHARLESTON W VA	4	55 57	17	1	50	10	2	2	5	6	7	7	10	12	19
TAMPA FLA	1	55 57	25	3	35	13	5	7	8	9	11	14	17	18	24
ATLANTA GA	1	55 56	16	2	60	13	2	5	6	7	9	11	12	17	22
CHATTANOOGA TENN	3	55 57	16	5	40	16	8	10	12	14	15	16	17	19	27
	4	55 56	18	5	35	17	9	10	10	11	13	20	21	22	32
		55 57	34	5	40	17	8	10	11	13	15	16	20	22	32
NASHVILLE TENN	1	57	23	7	140	30	10	19	22	23	25	30	32	34	39
CHICAGO ILL	1	55	28	5	46	15	6	8	10	11	13	14	17	19	25
	2	54	24	25	200	75	28	48	52	61	65	72	90	95	124
	2	55	25	4	163	33	9	10	13	15	25	28	31	36	92
	2	54 55	49	4	200	53	10	15	26	30	46	56	65	89	97
	4	55	29	6	74	21	7	9	11	15	17	20	22	28	41
	5	57	2	6	15	10			6	6	6	6	6	15	15
		54	24	25	200	75	28	48	52	61	65	72	90	95	124
		55	82	4	163	23	6	9	11	13	15	19	23	30	44
		57	2	6	15	10			6	6	6	6	6	15	15
		54 57	108	4	200	34	7	10	12	15	21	27	38	52	88
EAST ST LOUIS ILL	1	55 56	15	5	36	18	5	10	12	13	17	18	27	28	34
	2	55 56	14	7	28	12	6	7	9	11	11	12	14	15	19
		55 56	29	5	36	15	6	9	10	12	13	15	17	19	28
EAST CHICAGO IND	1	55 56	19	4	58	25	10	14	16	17	19	25	32	41	46
	2	55 56	26	10	67	25	12	13	14	17	21	25	28	36	44
	3	55 56	21	5	59	17	7	7	8	8	14	17	21	22	32
	4	55 56	20	4	56	19	6	9	10	11	15	18	22	29	32
		55 56	86	4	67	22	8	10	12	15	17	21	26	31	42
INDIANAPOLIS IND	1	57	25	12	55	24	13	14	16	19	22	25	28	32	39
CINCINNATI OHIO	1	54	36	1	205	31	5	7	10	14	19	25	34	43	56
	1	55	27	4	81	15	4	5	6	7	8	9	11	22	32
	1	54 55	63	1	205	24	4	5	7	9	12	18	25	35	54
YOUNGSTOWN OHIO	1	57	25	6	36	20	11	13	16	17	20	21	25	28	32
CLEVELAND OHIO	1	57	26	5	50	25	6	8	12	13	19	36	42	44	46
MILWAUKEE WIS	1	57	19	7	62	22	7	10	12	16	18	19	22	32	41
DES MOINES IOWA	1	57	26	3	52	18	6	9	11	13	14	21	23	25	28
WICHITA KANSAS	1	57	25	7	25	16	8	9	13	14	15	19	20	21	23
MINNEAPOLIS MINN	1	54 55	21	2	30	11	2	2	6	6	8	9	12	19	28
KANSAS CITY MO	2	55 56	19	2	43	15	5	9	11	12	13	14	15	22	25
	4	55 56	9	1	14	6	1	2	4	5	5	5	7	8	12
		55 56	28	1	43	12	2	5	6	9	11	13	14	15	24
ST LOUIS MO	1	55 56	25	4	38	11	5	7	8	9	11	12	13	13	19
BISMARCK ND	1	57	23	5	17	10	5	8	10	10	11	12	12	13	14
NEW ORLEANS LA	1	54 55	23		38	13	1	3	6	7	9	13	15	22	31
	2	54 55	22		38	11	1	4	7	7	8	11	13	19	22
	3	57	5	12	22	18	12	12	19	19	20	20	21	21	22
		54 57	50		38	13	1	5	6	7	11	13	19	21	25
TULSA OKLA	1	57	19	8	35	17	10	11	14	16	18	18	19	22	27
FT WORTH TEXAS	1	54 55	28	2	27	10	2	3	4	5	9	10	14	15	22
HOUSTON TEXAS	1	54	15		27	12	4	5	7	9	10	12	18	19	27
	1	55	56	2	83	21	9	10	11	14	18	21	24	27	32
	1	54 55	71		83	19	7	9	10	12	17	19	23	26	31
	3	57	4	8	67	38		8	8	32	32	32	52	52	67
		54 57	75		83	20	7	9	10	12	17	20	24	27	36
BELLAIRE TEXAS	1	54	17	5	20	10	5	5	8	9	10	10	11	12	19
	1	55	24	2	30	13	2	6	10	13	14	16	18	20	21
	1	54 55	41	2	30	12	4	6	9	10	11	14	16	19	21

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
DENVER COL	1	54 55	26	2	30	13	4	7	8	11	12	13	14	21	24
SALT LAKE CITY UTAH	2	54 55	26	5	110	24	6	9	11	14	16	19	21	25	32
CHEYENNE WYO	1	57	26	5	18	10	7	7	8	10	11	11	12	13	14
ANCHORAGE ALASKA	1	54 55	26		33	8		1	1	3	5	8	11	15	17
LOS ANGELES CALIF	1	54	3	122	202	154		124	124	124	140	140	140	140	202
	3	57	21	13	248	81	19	25	41	81	88	91	94	97	124
		54 57	24	13	248	90	19	32	79	86	89	92	97	117	140
SAN FRANCISCO CALIF	1	55	17	2	27	7	2	3	4	4	5	5	7	12	16
	1	56	15	2	34	12	2	3	5	6	10	10	22	24	28
	1	55 56	32	2	34	10	2	3	4	5	6	7	10	17	25
	2	57	3	2	39	20		2	2	2	22	22	22	22	41
		55	17	2	27	7	2	3	4	4	5	5	7	12	16
		56	15	2	34	12	2	3	5	6	10	10	22	24	28
		57	3	2	39	20		2	2	2	22	22	22	22	41
		55 57	35	2	39	11	2	3	4	5	6	8	13	21	27
PASADENA CALIF	1	54	15	40	404	141	67	76	83	86	124	132	146	152	373
	1	5	35	4	480	43	7	10	12	14	21	24	39	46	104
	1	5	4	21	40	30		22	22	25	25	25	39	39	41
	1	54 56	54	4	480	69	9	12	17	24	37	44	76	106	146
BERKELEY CALIF	1	54 55	28	2	183	47	3	9	16	22	25	46	52	67	97
SAN JOSE CALIF	1	54	20	2	124	38	9	11	12	15	28	36	46	72	86
	1	55	12	7	178	51	7	8	10	22	25	41	46	76	169
	1	56	20	8	104	37	12	18	25	30	36	39	44	54	57
	1	54 56	52	2	178	41	9	11	18	25	32	39	45	57	86
SAN LEANDRO CALIF	1	55 56	30	6	78	30	7	14	19	25	28	32	34	46	57
HONOLULU HAWAII	1	57	26	3	32	7	2	3	4	4	5	5	6	8	13
PORTLAND OREGON	1	54	11	6	160	60	6	13	13	25	49	52	92	97	140
	1	5	19	1	54	20	2	8	10	13	19	22	25	30	44
	1	54 55	30	1	160	35	6	8	12	18	23	28	36	49	92
	2	54	10	10	107	50	10	15	25	28	34	36	46	101	106
	5	54	10	20	114	78	22	56	59	70	73	76	104	110	117
	4	54	10	43	134	77	46	49	52	59	63	67	76	117	124
		54	41	6	160	66	13	25	36	49	59	72	97	107	121
		5	19	1	54	20	2	8	10	13	19	22	25	30	44
		54 55	60	1	160	51	8	13	23	30	44	52	67	97	114
SEATTLE WASH	1	57	20	3	37	19	7	11	13	14	20	21	24	28	32

TABLE 7. NITRATES—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10'											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36	2	20	6	2	3	4	5	6	6	7	8	9
MASSACHUSETS TOTAL	55 57	51	1	38	6	1	2	4	4	5	6	8	10	12
NEW HAMPSHRE TOTAL	57	17	4	35	12	4	6	7	8	9	10	11	24	25
NEW JERSEY TOTAL	55 56	130	2	69	11	3	4	4	5	6	7	9	12	20
NEW YORK TOTAL	54 57	84	1	74	17	2	5	7	10	14	18	22	27	35
PENNSYLVANIA TOTAL	54 57	538		83	16	4	7	9	11	13	16	20	24	31
DIS COLUMBIA TOTAL	54 56	36	1	93	24	6	7	9	10	15	21	31	43	49
KENTUCKY TOTAL	54 57	64	3	47	17	7	9	11	14	16	18	20	24	33
MARYLAND TOTAL	57	19	13	42	24	14	16	18	21	24	25	29	32	36
NO CAROLINA TOTAL	57	25	5	37	14	7	8	11	11	14	15	18	20	22
VIRGINIA TOTAL	57	23	4	112	22	9	11	13	15	16	17	19	27	36
WEST VIRGINA TOTAL	55 57	17	1	50	10	2	2	5	6	7	7	10	12	19
FLORIDA TOTAL	55 57	25	3	35	13	5	7	8	9	11	14	17	18	24
GEORGIA TOTAL	55 56	16	2	60	13	2	5	6	7	9	11	12	17	22
TENNESSEE TOTAL	55 57	57	5	140	22	9	10	13	16	20	22	25	31	35
ILLINOIS TOTAL	54 57	137	4	200	30	7	9	12	14	18	23	29	45	70
INDIANA TOTAL	55 57	111	4	67	22	8	11	13	15	19	22	27	32	41
OHIO TOTAL	54 57	114	1	205	23	5	7	9	13	16	20	27	35	45
WISCONSIN TOTAL	57	19	7	62	22	7	10	12	16	18	19	22	32	41
IOWA TOTAL	57	26	3	52	18	6	9	11	13	14	21	23	25	28
KANSAS TOTAL	57	25	7	25	16	8	9	13	14	15	19	20	21	23
MINNESOTA TOTAL	54 55	21	2	30	11	2	2	6	6	8	9	12	19	28
MISSOURI TOTAL	55 56	53	1	43	12	4	6	7	9	11	12	13	14	23
NORTH DAKOTA TOTAL	57	23	5	17	10	5	8	10	10	11	12	12	13	14
LOUISIANA TOTAL	54 57	50		38	13	1	5	6	7	11	13	19	21	25
OKLAHOMA TOTAL	57	19	8	35	17	10	11	14	16	18	18	19	22	27
TEXAS TOTAL	54 57	144		83	16	4	7	9	10	12	16	19	23	28
COLORADO TOTAL	54 55	26	2	30	13	4	7	8	11	12	13	14	21	24
IDAHO TOTAL	57	1	11	11	11					12	12	12	12	12
MONTANA TOTAL	57	1	9	9	9					9	9	9	9	9
UTAH TOTAL	54 55	26	5	110	24	6	9	11	14	16	19	21	25	32
WYOMING TOTAL	57	26	5	18	10	7	7	8	10	11	11	12	13	14
ALASKA TOTAL	54 55	26		33	8		1	1	3	5	8	11	15	17
CALIFORNIA TOTAL	54 57	223	2	480	48	5	10	14	21	27	37	49	77	110
HAWAII TOTAL	57	26	3	32	7	2	3	4	4	5	5	6	8	13
OREGON TOTAL	54 55	60	1	160	51	8	13	23	30	44	52	67	97	114
WASHINGTON TOTAL	57	20	3	37	19	7	11	13	14	20	21	24	28	32
NEW ENGLND TOTAL	55 57	104	1	38	7	2	3	4	5	6	6	8	10	12
MID ATLNTC TOTAL	54 57	752		83	15	4	5	7	9	12	15	19	23	31
MID EAST TOTAL	54 57	184	1	112	19	6	8	10	13	15	18	21	26	37
SOUTH EAST TOTAL	55 57	98	2	140	18	6	8	10	12	15	18	22	25	33
MID WEST TOTAL	54 57	381	1	205	25	6	9	12	14	18	21	28	36	51
GRT PLAINS TOTAL	54 57	148	1	52	13	5	7	8	10	12	13	15	20	24
GULF SOUTH TOTAL	54 57	213		83	15	3	7	9	10	13	16	19	22	28
ROCKY MNTN TOTAL	54 57	80	2	110	15	6	7	9	11	12	13	15	19	24
PAC COAST TOTAL	54 57	355		480	41	4	7	11	16	23	31	43	65	102
GRAND TOTAL	54 57	2315		83	21	4	6	8	11	13	17	21	27	41

TABLE 7. NITRATES—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23	1	16	5	1	3	3	4	5	5	6	8	10
LAKEHURST N J	1	55 56	19	2	55	11	2	3	5	6	7	7	8	8	10
KANAWHA CO W VA	1	55	17	1	14	6	1	2	4	5	6	8	9	11	12
HAMILTON COUNTY OHIO	1	54 55	22		52	10	3	4	5	6	6	7	8	10	13
DENVER COUNTY COLO	1	54 55	10	1	12	5	1	1	2	2	4	5	7	8	9
MULTNOMAH CNTY ORE	6	54	10	21	61	44	22	27	28	41	46	52	56	59	63
GRAND TOTAL		54 56	101		61	11	1	3	4	5	6	8	9	11	41
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		3	1					1	1	1	2	2

TABLE 7. NITRATES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) $\times 10^{-1}$

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		7	14	9	11	9	6	20	11	2	7	9	8
AVERAGE		4	9	6	5	7	4	11	6	2	5	6	5
MINIMUM		2	5	4	2	6	4	6	3	2	3	4	3
BOSTON MASS	55 57												
NUMBER OF SAMPLES		2	2	5	1	1	2	2	4	1	2	2	1
MAXIMUM		10	38	12	1	6	2	13	9	6	5	6	5
AVERAGE		8	25	7	1	6	2	7	5	6	3	5	5
MINIMUM		7	13	3	1	6	2	2	2	6	2	4	5
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		11	13	15	2	5	5	6	12	8	1	5	9
AVERAGE		8	10	9	2	5	3	4	8	6	1	5	7
MINIMUM		5	8	5	2	5	2	2	5	5	1	5	5
MANCHESTER N H	57												
NUMBER OF SAMPLES			1	2	2	2	1	1	2	1	2	1	2
MAXIMUM			11	10	35	23	25	7	9	10	28	4	12
AVERAGE			11	8	19	15	25	7	8	10	18	4	9
MINIMUM			11	6	4	8	25	7	7	10	9	4	6
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		5	6	48	8	7		3	4	5		7	13
AVERAGE		3	5	21	5	7		3	3	5		7	10
MINIMUM		2	4	6	3	7		3	3	5		7	8
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		8	9	69	62	6	3	4	5		6		7
AVERAGE		6	7	26	20	5	3	4	5		5		7
MINIMUM		5	5	5	4	4	3	4	5		5		7
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		9	12	66	59		4	5	5	7	6		7
AVERAGE		7	7	26	32		4	5	3	6	5		6
MINIMUM		6	5	5	5		4	5	2	6	4		6
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		10	4	49	48			5	5		8	10	11
AVERAGE		6	4	17	12			5	4		6	9	10
MINIMUM		4	4	5	2			5	4		3	8	9
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		23	21	5	46	7	5	7	6		22	18	18
AVERAGE		14	18	5	46	7	5	7	6		22	18	15
MINIMUM		7	15	5	46	7	5	7	6		22	18	13
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		12	20	67	64		5	11	14	5		13	17
AVERAGE		8	13	24	22		4	9	9	5		13	14
MINIMUM		4	9	5	3		4	8	5	5		13	12
NEW YORK N Y	54 57												
NUMBER OF SAMPLES		4	5	4	4	1	9	7	5	6	6	7	7
MAXIMUM		47	27	43	19	1	29	36	23	35	74	27	26
AVERAGE		30	10	18	8	1	11	18	13	18	36	13	8
MINIMUM		15	2	2	3	1	1	7	8	6	1	1	2
BUFFALO N Y	57												
NUMBER OF SAMPLES		2	2	2	2	1	3	1	1	2	1	1	1
MAXIMUM		25	31	35	33	7	33	35	19	7	33	20	21
AVERAGE		16	23	21	18	7	23	35	19	5	33	20	21
MINIMUM		7	15	7	4	7	16	35	19	4	33	20	21
PHILADELPHIA PA	54 57												
NUMBER OF SAMPLES		24	29	34	30	26	27	35	35	41	39	47	53
MAXIMUM		79	83	65	35	38	28	24	26	43	72	64	60
AVERAGE		25	28	20	12	10	13	12	15	18	24	20	21
MINIMUM		1	2	2	2		3		2	7	6	2	3
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			6	5	4	8			8	5	16	13	
AVERAGE			6	5	4	7			8	5	11	13	
MINIMUM			6	5	4	7			8	5	7	13	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			9	5	7	8		7	8	10	8	12	9
AVERAGE			9	5	7	7		7	8	8	7	10	6
MINIMUM			9	5	7	7		7	8	7	7	9	4
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			12		20	8	8	16	13	18	6		8
AVERAGE			12		18	6	7	9	8	12	6		8
MINIMUM			12		16	5	7	2	3	8	6		8

TABLE 7. NITRATES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		10	6	7	9	6	7	8		12	14	10	8
AVERAGE		6	6	5	4	5	7	8		9	8	8	6
MINIMUM		5	6	3	2	5	7	8		7	6	7	6
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		10	9	11			14	7		29	6	6	5
AVERAGE		7	5	6			9	6		16	5	5	5
MINIMUM		5	3	4			5	6		4	4	4	5
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			16	9	16	21	17	8	8	29	11	7	9
AVERAGE			13	9	11	13	12	8	8	17	11	4	7
MINIMUM			10	9	7	8	8	8	8	11	11	3	5
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	5		1	3	5	4	7	6	3	1	
MAXIMUM		18	93		9	14	41	32	47	77	62	7	
AVERAGE		18	41		9	9	16	23	18	33	38	7	
MINIMUM		18	9		9	6	4	7	1	9	9	7	
LOUISVILLE KY	54 57												
NUMBER OF SAMPLES		2	3	2	2	1	3	13	13	12	6	1	6
MAXIMUM		19	36	33	22	14	23	39	35	47	27	15	24
AVERAGE		17	33	20	18	14	16	14	16	18	15	15	19
MINIMUM		16	30	7	15	14	7	4	7	3	7	15	8
BALTIMORE MD	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	2	3	1			
MAXIMUM		31	16	42	42	14	29	23	36	26			
AVERAGE		23	14	28	30	14	24	20	30	26			
MINIMUM		16	13	15	20	14	21	18	19	26			
CHARLOTTE NC	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	2	2	1	2	3
MAXIMUM		22	8	12	14	11	18	17	20	20	25	14	37
AVERAGE		20	8	11	11	9	13	15	16	14	25	12	23
MINIMUM		18	8	11	8	8	5	14	12	8	25	11	12
NORFOLK VA	57												
NUMBER OF SAMPLES		2	2	3	1	2	2	3	1	1	1	3	2
MAXIMUM		17	19	112	26	41	13	18	35	27	16	17	26
AVERAGE		10	14	46	26	34	12	15	35	27	16	15	19
MINIMUM		4	9	12	26	27	11	10	35	27	16	14	12
CHARLESTON W VA	55 57												
NUMBER OF SAMPLES			1	2		2	2	2	1	1	3	2	1
MAXIMUM			7	22		11	2	4	8	5	11	10	50
AVERAGE			7	20		8	2	2	8	5	8	8	50
MINIMUM			7	19		5	2	1	8	5	7	6	50
TAMPA FLA	55 57												
NUMBER OF SAMPLES		3	2	2	4	2	1	2	2	3	1	2	1
MAXIMUM		19	24	18	15	16	11	9	9	20	16	25	35
AVERAGE		15	19	10	9	12	11	8	7	11	16	18	35
MINIMUM		9	15	3	5	9	11	8	6	3	16	12	35
ATLANTA GA	55 56												
NUMBER OF SAMPLES		1	1	3	2	1	1	3	1		1	1	1
MAXIMUM		20	5	12	16	2	7	9	8		26	60	17
AVERAGE		20	5	8	12	2	7	6	8		26	60	17
MINIMUM		20	5	2	9	2	7	5	8		26	60	17
CHATTANOOGA TENN	55 57												
NUMBER OF SAMPLES		3	5	3	2	2		1	4	4	5	3	2
MAXIMUM		27	17	24	16	40		35	12	20	32	11	33
AVERAGE		21	13	18	10	30		35	9	16	18	10	24
MINIMUM		12	8	13	5	20		35	5	12	9	10	15
NASHVILLE TENN	57												
NUMBER OF SAMPLES		4	2	2	2	3	2	2	2	3	1		
MAXIMUM		36	39	29	33	23	25	25	39	140	10		
AVERAGE		32	31	21	20	19	22	22	36	63	10		
MINIMUM		29	24	14	7	12	20	20	33	19	10		
CHICAGO ILL	54 57												
NUMBER OF SAMPLES		4	7	7	3	8	12	14	9	8	16	13	7
MAXIMUM		61	163	44	13	21	52	125	66	87	200	115	97
AVERAGE		24	64	14	9	13	23	37	28	45	43	39	44
MINIMUM		11	10	6	6	6	6	6	4	20	7	7	22
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		17	10	11	28	16	29	36	27	17	7	12	34
AVERAGE		13	8	8	16	14	20	36	17	11	7	11	26
MINIMUM		12	7	5	5	13	15	36	10	7	7	11	18
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		41	22	31	39	60	58	67	59	22	35	29	44
AVERAGE		16	13	17	23	28	29	28	36	13	20	16	27
MINIMUM		4	6	7	11	10	8	4	11	8	11	8	11

TABLE 7. NITRATES—URBAN STATIONS

(MICROGRAMS PER CUBIC MF 10

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
INDIANAPOLIS IND	57												
NUMBER OF SAMPLES		1	2	1	2	3	2	2	2	2	4	2	2
MAXIMUM		12	27	23	14	37	27	55	38	41	29	20	14
AVERAGE		12	22	23	13	24	22	45	35	30	24	16	13
MINIMUM		12	17	23	13	14	17	36	32	19	21	13	13
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	5	8	9	12	8	3	6
MAXIMUM		31	81	27	6	20	39	17	35	205	57	33	104
AVERAGE		15	57	15	5	14	20	9	9	42	23	14	40
MINIMUM		5	35	4	5	9	6	3	1	5	3	4	8
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	2	3	2
MAXIMUM		11	31	24	25	29	13	29	35	28	22	36	19
AVERAGE		11	25	18	20	22	13	28	28	22	19	23	12
MINIMUM		11	20	12	15	15	13	28	22	16	16	16	6
CLEVELAND OHIO	57												
NUMBER OF SAMPLES		2	3	2	1	3	2	2	2	2	2	3	2
MAXIMUM		18	50	11	9	38	14	43	50	50	35	44	8
AVERAGE		12	33	8	9	21	9	43	47	32	28	36	7
MINIMUM		6	8	5	9	13	5	43	45	14	21	22	7
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		23	14	19	62	16	12	48	30	21	18		
AVERAGE		22	10	18	35	13	12	43	19	16	18		
MINIMUM		21	7	17	7	10	12	38	8	11	18		
DES MOINES IOWA	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	2	2	2	2	2	3
MAXIMUM		52	30	24	21	26	19	27	34	11	23	23	15
AVERAGE		33	20	18	17	16	16	26	21	7	14	21	10
MINIMUM		15	10	12	13	9	13	25	9	3	5	20	6
WICHITA KANSAS	57												
NUMBER OF SAMPLES		2	3	1	3	1	3	2	2	1	2	3	2
MAXIMUM		21	24	11	18	9	13	25	20	20	24	15	22
AVERAGE		21	16	11	15	9	9	22	17	20	19	12	21
MINIMUM		21	9	11	13	9	8	20	15	20	14	7	20
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	1	1	1		2		5	4	3	2	1
MAXIMUM		30	17	6	12		7		29	18	26	4	6
AVERAGE		30	17	6	12		4		10	10	19	3	6
MINIMUM		30	17	6	12		2		2	7	7	2	6
KANSAS CITY MO	55 56												
NUMBER OF SAMPLES		4	2	3	4	3	2	2	4	1	1	1	1
MAXIMUM		15	12	23	14	23	13	10	30	7	2	11	43
AVERAGE		12	9	19	8	13	9	5	14	7	2	11	43
MINIMUM		8	6	15	2	5	5	1	5	7	2	11	43
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		3	3	2	2	3	1	2	3	2
MAXIMUM		9	25		13	11	11	15	13	9	7	8	38
AVERAGE		8	21		12	10	9	10	11	9	6	5	27
MINIMUM		8	18		11	10	8	6	8	9	5	4	16
BISMARCK ND	57												
NUMBER OF SAMPLES		2	2	1	2	2	2	2	3	1	3	2	1
MAXIMUM		6	17	7	15	13	13	14	11	10	12	14	13
AVERAGE		5	14	7	10	13	10	12	9	10	11	13	13
MINIMUM		5	11	7	5	13	8	11	8	10	11	12	13
NEW ORLEANS LA	54 57												
NUMBER OF SAMPLES		3	5	5	4	4	4	6	4	4	3	5	3
MAXIMUM		31	24	20	13	22	13	21	19	5	31	30	38
AVERAGE		22	21	9	11	14	9	10	8	2	11	14	30
MINIMUM		15	19	1	7	7	7		3	1		5	15
TULSA OKLA	57												
NUMBER OF SAMPLES		3		2	1	2	1		3	1	2	2	2
MAXIMUM		35		26	18	16	14		24	8	26	11	21
AVERAGE		23		22	18	13	14		19	8	21	10	16
MINIMUM		18		19	18	10	14		14	8	16	10	12
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	3	3	2	2	2	2	2	2	3	2	3
MAXIMUM		27	20	24	19	11	5	10	10	6	14	10	27
AVERAGE		20	16	10	15	8	3	10	7	4	8	6	11
MINIMUM		14	14	2	12	5	2	10	4	3	2	2	2
HOUSTON TEXAS	54 57												
NUMBER OF SAMPLES		2	5	6	6	5	13	7	3	6	6	9	7
MAXIMUM		67	20	15	48	26	30	26	31	40	83	17	61
AVERAGE		37	12	7	27	15	18	12	19	26	36	11	31
MINIMUM		8	7	2	16	9		5	9	18	4	10	12
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	3	3	4	7	5	4	2	3
MAXIMUM		30	14	10	22	21	20	13	22	19	12	10	20
AVERAGE		14	11	4	20	19	17	11	14	11	8	10	11
MINIMUM		4	8	2	18	17	15	9	6	3	5	10	5

TABLE 7. NITRATES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) $\times 10^{-1}$

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		11	23	22	7	14	28	13	14	12	8	12	30
AVERAGE		11	12	18	5	12	16	12	13	9	8	12	26
MINIMUM		11	2	15	3	11	4	12	13	7	8	12	22
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	2	2	2	2	2	2	2	2	2	2	3
MAXIMUM		74	82	23	15	18	20	9	14	14	28	22	110
AVERAGE		40	53	17	13	14	16	7	9	9	22	21	45
MINIMUM		18	25	12	12	10	12	6	5	5	16	20	9
CHEYENNE WYO	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	3	2	2	1	2	3
MAXIMUM		15	15	14	13	12	18	15	11	10	7	8	11
AVERAGE		13	12	11	12	12	14	12	9	8	7	7	8
MINIMUM		11	9	8	10	12	12	11	7	7	7	7	5
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	2	2	2		5	1	3	3	3	1	3
MAXIMUM		33	28	6	17		13	18	11	16	4	1	8
AVERAGE		33	14	3	10		5	18	6	14	2	1	3
MINIMUM		33	1	1	3		1	18	1	12		1	
LOS ANGELES CALIF	54 57												
NUMBER OF SAMPLES		2	2	2	1	2	3	4	2	1	2	2	1
MAXIMUM		19	90	86	41	77	122	202	97	97	117	248	125
AVERAGE		16	87	55	41	54	101	131	93	97	103	135	125
MINIMUM		13	84	25	41	32	89	80	89	97	89	22	125
SAN FRANCISCO CALIF	55 57												
NUMBER OF SAMPLES		4	3	3	1	3	2	5	2	3	3	5	1
MAXIMUM		39	20	10	13	25	34	5	5	6	8	27	17
AVERAGE		24	15	4	13	11	18	4	5	4	5	13	17
MINIMUM		10	6	2	13	3	2	2	5	2	4	5	17
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		5	6	5	4	4	9	8	3	4	6		
MAXIMUM		48	480	99	24	46	146	137	85	142	404		
AVERAGE		39	133	33	21	25	57	53	59	60	174		
MINIMUM		21	11	11	15	4	5	12	7	18	7		
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	3				2	3	2	2	4	5	4
MAXIMUM		73	183				92	26	3	49	49	164	66
AVERAGE		58	147				52	21	2	37	23	39	44
MINIMUM		44	84				12	16	2	25	3	3	16
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	2		3	4	5	5	6	4	7	6
MAXIMUM		178	160	14		59	41	75	55	104	84	124	91
AVERAGE		73	56	13		44	33	40	33	49	51	30	23
MINIMUM		31	8	12		32	19	9	23	10	28	2	7
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		18	6	29	24	31	78	60	53	20	58	33	7
AVERAGE		14	6	17	24	31	60	40	33	20	54	24	7
MINIMUM		11	6	6	24	31	43	32	13	20	47	15	7
HONOLULU HAWAII	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	3	3	2	1	3	2
MAXIMUM		5	13	15	14	32	6	3	4	5	6	9	5
AVERAGE		5	10	11	8	17	6	3	3	5	6	6	4
MINIMUM		5	7	8	6	3	6	3	3	5	6	5	3
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1		3	1			2	7	5	21	20	
MAXIMUM		13		54	1			25	30	42	134	160	
AVERAGE		13		38	1			24	15	23	59	73	
MINIMUM		13		19	1			24	2	10	8	6	
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		20	15	14	9	22	14	37	30	33	28		
AVERAGE		15	13	14	6	20	10	25	27	29	28		
MINIMUM		11	11	14	3	20	7	13	25	25	28		

TABLE 7. NITRATES—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		16	10	11		3	5	5	9	9	4	7	4
AVERAGE		10	10	7		3	2	4	5	7	4	6	3
MINIMUM		5	10	4		3	1	4	2	6	4	6	2
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM		6	8	55	53	4	2	2		8	7	10	10
AVERAGE		4	8	23	22	3	2	2		6	7	9	10
MINIMUM		3	8	8	6	2	2	2		5	7	8	10
KANAWHA CO W VA	55												
NUMBER OF SAMPLES		1	3	2		2	1	3	1		2	1	1
MAXIMUM		11	14	13		8	1	5	6		5	4	9
AVERAGE		11	10	12		8	1	3	6		3	4	9
MINIMUM		11	6	12		8	1	2	6		1	4	9
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1					4	4	4	4	3	2
MAXIMUM			43					8	10	11	7	7	52
AVERAGE			43					6	6	9	4	5	32
MINIMUM			43					4	3	7		3	13
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			12	4	5			7		2	8	9	1
AVERAGE			12	4	5			7		1	5	9	1
MINIMUM			12	4	5			7		1	2	9	1

TABLE 8. SULFATES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^1											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55 56	36	74	383	197	108	119	146	162	186	213	235	278	302
BOSTON MASS	1	55 57	25	35	159	99	52	60	81	86	98	119	129	136	151
EVERETT MASS	1	55	26	32	225	88	39	49	60	65	74	85	91	119	136
MANCHESTER N H	1	57	17	22	273	103	34	60	79	91	96	99	104	128	136
ELIZABETH N J	1	55 56	21	9	330	147	85	95	104	119	129	136	179	205	270
PAULSBORO N J	1	55 56	25	7	434	193	91	104	161	170	188	205	228	253	310
CAMDEN N J	1	55 56	21	11	327	171	74	85	119	130	168	192	220	253	290
PERTH AMBOY N J	1	55 56	23	5	298	136	52	83	91	100	136	149	162	173	270
TRENTON N J	1	55 56	17	64	380	165	69	85	104	119	146	156	198	270	310
JERSEY CITY N J	1	55 56	23	114	366	198	123	136	165	174	189	200	220	247	310
NEW YORK N Y	1	57	5	211	406	321	235	235	310	310	356	356	382	382	408
	2	54	25	10	510	252	45	179	235	258	280	290	305	325	382
	2	55	21	72	485	242	104	146	168	188	215	235	290	356	408
	2	56	3	179	283	242		179	179	179	270	270	270	270	310
	2	54 56	49	10	510	247	79	162	196	225	256	277	295	322	382
	3	54	8	7	276	183	7	104	104	179	205	247	258	258	270
	3	55	17	162	383	274	179	239	248	257	266	270	310	341	356
	3	54 55	25	7	383	245	164	179	241	248	257	264	283	310	356
		54	34	5	510	228	10	104	205	241	258	274	292	306	356
		55	38	72	485	256	146	173	196	235	251	266	300	333	382
		56	3	179	283	242		179	179	179	270	270	270	270	310
		57	5	211	406	321	235	235	310	310	356	356	382	382	408
		54 57	80	5	510	248	98	169	209	239	257	275	297	327	376
BUFFALO N Y	1	57	6	99	266	161	104	104	136	136	156	168	168	179	179
	2	57	13	57	317	139	56	85	91	112	136	146	156	179	205
		57	19	57	317	146	60	91	112	128	143	149	164	179	205
PHILADELPHIA PA	1	54	71	4	878	270	98	119	166	195	235	266	310	426	468
	1	55	281		853	244	110	144	167	190	224	251	277	317	408
	1	56	15	109	633	278	136	156	205	235	258	270	356	382	468
	1	54 56	367		878	250	108	142	168	193	228	254	283	333	435
	3	54	4	8	129	72		8	8	52	52	52	104	104	136
	4	56	14	53	733	266	60	119	179	196	205	235	270	310	616
	4	57	2	214	227	220			220	220	220	220	220	235	235
	4	56 57	16	53	733	260	79	119	188	196	215	235	253	310	356
	5	56	14	84	402	246	91	156	192	220	235	247	270	356	391
	6	56	15	166	341	245	171	179	225	235	253	261	280	290	310
	7	56	14	82	459	205	91	119	136	168	179	213	228	235	356
		54	75	4	878	260	91	114	159	184	225	257	303	420	468
		55	281		853	244	110	144	167	190	224	251	277	317	408
		56	72	53	733	248	115	156	136	210	230	250	270	319	387
		57	2	214	227	220			220	220	220	220	220	235	235
		54 57	430		878	247	107	142	169	194	225	251	278	325	426
ALTOONA PA	1	56	13	49	153	97	52	60	79	98	107	109	112	114	119
BRISTOL PA	1	55 56	18	93	278	157	104	110	113	119	149	164	179	205	253
CHESTER PA	1	55 56	18	66	266	159	79	91	104	128	146	205	217	223	235
ERIE PA	1	56	25	38	166	82	52	57	64	67	76	82	91	104	136
PITTSBURGH PA	1	56	21	29	388	159	39	74	98	112	156	188	205	247	270
WILLIAMSPORT PA	1	55 56	23	102	284	178	122	133	146	168	186	194	201	215	253
WASHINGTON DC	1	54	26	1	160	50	2	4	6	8	16	60	79	109	119
	2	55 56	20	27	274	182	104	136	149	168	188	205	225	244	261
		54 56	46	1	274	107	4	8	26	74	108	136	156	196	235
LOUISVILLE KY	1	54	21	3	415	167	6	12	104	146	164	179	205	283	310
	1	55	21	32	312	187	112	128	156	171	192	205	225	247	270
	1	54 55	42	3	415	177	12	112	144	160	175	192	213	258	300
	2	54	13	69	240	128	69	79	85	91	119	128	136	156	253
	2	55	10	9	335	120	9	39	60	69	98	104	136	156	235
	2	54 55	23	9	335	124	39	69	79	91	104	125	136	156	253
	3	54	5	2	74	18	2	2	5	5	5	5	7	7	79
	4	57	2	105	130	117			119	119	119	119	119	136	136
		54	39	2	415	135	5	12	77	98	136	148	171	205	283
		55	31	9	335	166	39	98	119	136	171	192	213	235	270
		57	2	105	130	117			119	119	119	119	119	136	136
		54 57	72	2	415	148	9	69	98	122	142	164	190	229	280

TABLE 8. SULFATES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
BALTIMORE MD	1	57	19	10	254	120	32	52	91	104	119	136	146	156	235
CHARLOTTE NC	1	57	25	29	141	76	30	45	60	69	81	85	91	100	114
NORFOLK VA	1	57	23	62	234	132	91	101	108	115	125	130	136	156	205
CHARLESTON W VA	1	54	11		311	71	1	2	4	4	5	60	91	136	205
	2	55 57	17	41	461	220	79	91	119	205	235	270	297	356	382
		54 57	28		461	166	4	5	60	91	136	205	270	297	356
TAMPA FLA	1	54	10		17	5	1	1	3	3	5	5	6	6	9
	1	55	21	46	173	102	63	69	82	88	104	112	119	130	146
	1	57	4	24	75	58		26	26	65	65	65	69	69	79
	1	54 57	35		173	69	3	6	26	64	74	85	104	115	136
ATLANTA GA	1	54	10	1	66	11	1	3	3	5	5	6	6	8	12
	1	55	15	36	148	90	45	52	79	83	91	98	112	119	136
	1	54 56	26	1	332	69	3	5	8	39	69	83	91	112	128
CHATTANOOGA TENN	3	55	14	52	167	108	52	85	91	104	108	112	119	128	156
	3	57	2	176	321	248			179	179	179	179	179	356	356
	3	55 57	16	52	321	126	79	85	98	104	112	119	128	156	168
	4	55 56	18	76	275	134	83	91	104	119	136	142	147	150	156
		55 57	34	52	321	130	79	89	100	112	119	132	144	151	179
NASHVILLE TENN	1	57	23		180	65	9	30	32	34	65	72	77	104	136
CHICAGO ILL	1	54	4		358	101		1	1	4	4	4	45	45	408
	1	55	28	73	373	198	109	125	136	156	192	220	253	270	294
	1	54 55	32		373	186	45	109	130	149	186	205	244	278	302
	2	54	30	2	540	237	4	104	119	168	235	300	325	348	468
	2	55	26	67	435	231	119	146	196	209	222	235	270	300	356
	2	54 55	56	2	540	235	98	116	162	196	224	275	300	336	423
	3	54	3	5	69	28		5	5	5	12	12	12	12	69
	4	55	29	76	318	145	91	104	119	129	139	146	156	173	196
	5	57	2	235	254	244			235	235	235	235	235	270	270
		54	37		540	206	4	7	98	119	173	280	318	348	438
		55	83	67	435	190	101	119	134	149	179	200	225	264	302
		57	2	235	254	244			235	235	235	235	235	270	270
		54 57	122		540	196	74	108	128	149	176	208	245	293	345
EAST ST LOUIS ILL	1	55 56	15	126	317	218	146	156	188	196	220	235	270	290	333
	2	55 56	14	74	250	144	74	104	112	128	136	143	156	179	253
		55 56	29	74	317	182	104	125	140	152	179	192	220	253	290
EAST CHICAGO IND	1	55 56	19	109	436	216	119	136	179	192	205	220	253	290	333
	2	55 56	26	78	454	212	119	130	149	168	205	235	247	264	310
	3	55 56	21	64	492	234	91	119	136	164	188	205	310	356	448
	4	55 56	20	32	422	179	69	79	104	119	164	179	220	253	310
		55 56	86	32	492	211	100	119	140	166	189	218	248	286	356
INDIANAPOLIS IND	1	57	25	48	259	132	83	91	107	113	122	129	162	173	205
DETROIT MICH	1	53	21		222	74	1	3	4	9	63	69	128	156	192
	1	54	12		462	96	1	7	12	23	30	104	119	136	156
	1	53 54	33		462	82	1	4	9	12	63	104	123	136	192
CINCINNATI OHIO	1	54	73	1	358	46	3	5	7	9	12	26	45	65	136
	1	55	27	30	267	152	79	112	128	141	156	165	179	195	205
	1	54 55	100	1	358	75	4	6	9	16	38	69	121	149	195
	2	54	20	2	240	54	2	7	9	14	18	39	60	91	119
	3	54	22	2	108	34	3	5	8	13	16	26	42	79	91
	4	54	28	3	324	110	4	16	23	28	136	156	173	192	253
		54	143	1	358	59	3	6	8	12	22	37	60	113	179
		55	27	30	267	152	79	112	128	141	156	165	179	195	205
		54 55	170	1	358	74	4	6	9	17	35	65	113	149	195
YOUNGSTOWN OHIO	1	57	25	63	314	168	91	104	119	130	149	168	205	235	297
CLEVELAND OHIO	1	57	26	71	395	187	87	104	141	151	179	199	215	253	310
MILWAUKEE WIS	1	57	19	22	274	116	45	79	91	96	101	104	119	146	220
DES MOINES IOWA	1	57	26	35	425	123	52	60	81	86	98	119	136	168	205
WICHITA KANSAS	1	57	25	27	167	63	30	41	45	52	60	63	68	79	119
MINNEAPOLIS MINN	1	54	15	3	109	15	3	4	5	5	9	10	12	14	20
	1	55	20	24	317	118	30	69	79	91	119	128	136	149	192
	1	54 55	35	3	317	74	4	8	12	20	69	85	119	132	156

TABLE 8. SULFATES—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
KANSAS CITY MO	2	54 56	25	2	310	115	5	23	56	79	104	119	156	213	235
	3	54	6	3	19	7	3	3	4	4	5	6	6	6	6
	4	55 56	9	28	223	86	28	30	45	60	69	69	74	79	205
		54 56	40	2	310	92	4	6	28	52	69	95	119	179	223
ST LOUIS MO	1	55 56	25	71	439	216	104	119	149	168	235	245	260	270	356
BISMARCK ND	1	57	23	18	142	48	19	28	34	37	43	52	56	60	79
NEW ORLEANS LA	1	54 55	25	1	136	66	9	47	54	58	66	72	79	91	125
	2	54 55	24	2	115	57	4	29	34	43	52	60	83	91	101
	3	57	5	12	115	48	12	12	23	23	26	26	69	69	119
		54 57	54	1	136	60	9	27	41	52	59	66	79	91	112
TULSA OKLA	1	57	19	8	126	56	20	34	40	43	45	52	69	79	98
FT WORTH TEXAS	1	54 55	36		151	58	6	14	39	47	57	71	77	91	104
LAKEWORTH TEXAS	1	54	6		5	2			1	1	1	3	3	5	5
HOUSTON TEXAS	1	54	26		188	30	1	1	2	3	5	16	23	60	98
	1	55	56	25	336	110	37	48	60	68	88	112	128	168	205
	1	54 55	82		336	84	2	16	37	51	65	86	107	133	192
	3	57	4		104	41		1	1	1	1	1	69	69	104
		54 57	86		336	82	1	14	35	49	64	86	104	130	186
BELLAIRE TEXAS	1	54 55	45		196	67	8	34	45	52	64	72	86	100	128
DENVER COL	1	54 55	26	2	273	61	4	23	45	47	51	65	72	82	88
SALT LAKE CITY UTAH	2	54 55	31		374	123	1	60	85	98	114	130	146	179	247
CHEYENNE WYO	1	57	26	26	123	54	34	39	46	48	51	55	57	65	74
ANCHORAGE ALASKA	1	54	31		199	33		1	2	4	6	18	37	69	91
	1	55	10	21	123	72	23	34	60	65	69	79	91	98	104
	1	54 55	41		199	42	1	1	4	6	23	39	66	79	104
LOS ANGELES CALIF		54	19		281	107	1	2	9	49	69	104	192	220	253
		57	21	59	266	148	69	91	125	136	156	171	183	192	201
		54 57	40		281	128	2	49	69	112	136	164	186	199	235
SAN FRANCISCO CALIF	1	55	17	24	205	85	49	52	57	65	74	79	98	119	136
	1	56	15	32	216	83	39	42	55	57	65	69	79	119	179
	1	55 56	32	24	216	84	39	49	56	60	67	74	91	119	168
	2	57	3	23	59	39		23	23	23	39	39	39	39	60
		55 57	35	23	216	80	37	45	54	58	65	72	91	112	168
PASADENA CALIF	1	54	23	1	565	175	3	14	20	52	136	192	235	290	537
	1	55	35		335	161	60	79	104	143	168	186	211	229	290
	1	56	4	122	410	282		136	136	270	270	270	356	356	468
	1	54 56	62		565	174	13	52	94	132	162	192	220	270	333
BERKELEY CALIF	1	54 55	35		250	26	2	2	3	4	5	6	8	26	91
SAN JOSE CALIF	1	54	27		46	7	1	2	3	4	5	6	7	11	12
	1	55	12	3	232	62	3	4	9	23	39	45	52	119	205
	1	56	20	48	229	106	52	69	83	91	104	110	116	128	156
	1	54 56	59		232	52	2	4	6	10	20	49	79	107	128
SAN LEANDRO CALIF	1	55 56	30	15	151	77	45	56	64	69	74	79	91	104	115
HONOLULU HAWAII	1	57	26	25	184	50	28	30	36	38	42	47	50	60	69
PORTLAND OREGON	1	54	20	1	246	63	2	4	5	8	9	14	91	136	205
	1	55	19	43	184	114	52	69	87	98	112	119	136	162	173
	1	54 55	39	1	246	88	4	8	14	60	88	100	125	162	188
	2	54	15	7	388	147	8	8	12	119	179	192	235	253	310
	4	54	10	60	213	105	60	65	69	95	100	104	112	119	156
	5	54	10	22	366	147	23	60	69	91	125	130	136	179	310
		54	55	1	388	109	5	8	14	63	98	119	156	199	258
		55	19	43	184	114	52	69	87	98	112	119	136	162	173
		54 55	74	1	388	110	7	10	55	84	100	119	146	179	235
SEATTLE WASH	1	57	20		76	23	1	1	2	8	15	18	30	45	69

TABLE 8. SULFATES—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36	74	383	197	108	119	146	162	186	213	235	278	302
MASSACHUSETS TOTAL	55 57	51	32	225	93	39	52	63	74	86	95	119	131	151
NEW HAMPSHRE TOTAL	57	17	22	273	103	34	60	79	91	96	99	104	128	136
NEW JERSEY TOTAL	55 56	130	5	434	169	80	97	121	134	161	178	200	239	298
NEW YORK TOTAL	54 57	99	5	510	228	85	149	170	205	241	260	283	310	363
PENNSYLVANIA TOTAL	54 57	548		878	224	88	117	147	173	200	232	259	298	344
DIS COLUMBIA TOTAL	54 56	46	1	274	107	4	8	26	74	108	136	156	196	235
KENTUCKY TOTAL	54 57	72	2	415	148	9	69	98	122	142	164	190	229	260
MARYLAND TOTAL	57	19	10	254	120	32	52	91	104	119	136	146	156	235
NO CAROLINA TOTAL	57	25	29	141	76	30	45	60	69	81	85	91	100	114
VIRGINIA TOTAL	57	23	62	234	132	91	101	108	115	125	130	136	156	205
WEST VIRGINA TOTAL	54 57	28		461	166	4	5	60	91	136	205	270	297	356
FLORIDA TOTAL	54 57	35		173	69	3	6	26	64	74	85	104	115	136
GEORGIA TOTAL	54 56	26	1	332	69	3	5	8	39	69	83	91	112	128
TENNESSEE TOTAL	55 57	57		321	104	31	49	74	86	104	113	129	145	156
ILLINOIS TOTAL	54 57	151		540	193	79	111	130	149	177	205	241	285	333
INDIANA TOTAL	55 57	111	32	492	193	88	110	124	144	172	194	228	261	338
MICHIGAN TOTAL	53 54	33		462	82	1	4	9	12	63	104	123	136	192
OHIO TOTAL	54 57	221	1	395	98	5	8	16	38	79	114	145	179	229
WISCONSIN TOTAL	57	19	22	274	116	45	79	91	96	101	104	119	146	220
IOWA TOTAL	57	26	35	425	123	52	60	81	86	98	119	136	168	205
KANSAS TOTAL	57	25	27	167	63	30	41	45	52	60	63	68	79	119
MINNESOTA TOTAL	54 55	35	3	317	74	4	8	12	20	69	85	119	132	156
MISSOURI TOTAL	54 56	65	2	439	140	6	30	69	96	119	151	210	240	290
NORTH DAKOTA TOTAL	57	23	18	142	48	19	28	34	37	43	52	56	60	79
LOUISIANA TOTAL	54 57	54	1	136	60	9	27	41	52	59	66	79	91	112
OKLAHOMA TOTAL	57	19	8	126	56	20	34	40	43	45	52	69	79	98
TEXAS TOTAL	54 57	173		336	71	2	13	36	48	61	73	89	109	146
COLORADO TOTAL	54 55	26	2	273	61	4	23	45	47	51	65	72	82	88
IDAHO TOTAL	57	1	14	14	14					14	14	14	14	14
MONTANA TOTAL	57	1	9	9	9					9	9	9	9	9
UTAH TOTAL	54 55	31		374	123	1	60	85	98	114	130	146	179	247
WYOMING TOTAL	57	26	26	123	54	34	39	46	48	51	55	57	65	74
ALASKA TOTAL	54 55	41		199	42	1	2	6	22	34	42	56	74	98
CALIFORNIA TOTAL	54 57	261		565	96	3	6	26	53	71	94	122	172	221
HAWAII TOTAL	57	26	25	184	50	28	30	36	38	42	47	50	60	69
OREGON TOTAL	54 55	74	1	388	110	7	10	55	84	100	119	146	179	235
WASHINGTON TOTAL	57	20		76	23	1	1	2	8	15	18	30	45	69
NEW ENGLND TOTAL	55 57	104	22	383	130	49	66	82	95	112	128	151	189	258
MID ATLNTC TOTAL	54 57	777		878	215	85	115	143	169	195	227	256	293	365
MID EAST TOTAL	54 57	213		461	129	8	50	79	98	116	137	164	203	258
SOUTH EAST TOTAL	54 57	118		332	86	5	26	50	72	84	99	114	129	149
MID WEST TOTAL	53 57	535		540	144	7	30	82	110	131	156	189	229	292
GRT PLAINS TOTAL	54 57	174	2	439	101	10	29	44	59	73	95	124	156	245
GULF SOUTH TOTAL	54 57	246		336	67	4	21	38	47	59	70	85	102	128
ROCKY MNTN TOTAL	54 57	85		374	80	9	37	48	52	60	75	89	119	156
PAC COAST TOTAL	54 57	422		565	86	2	7	24	45	61	79	107	149	204
GRAND TOTAL	53 57	2674		878	139	8	43	67	91	116	143	179	225	288

TABLE 8. SULFATES— SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23	32	146	65	34	43	45	50	56	60	76	85	104
LAKEHURST N J	1	55 56	19	12	225	108	34	60	74	79	109	114	141	151	179
KANAWHA CO W VA	1	54 55	23		281	124	1	60	69	79	100	156	188	205	253
HILLSBOROUGH CO FLA	1	54	4	1	4	3		1	1	3	3	3	4	4	4
FULTON CO GEORGIA	1	54	8	2	71	14	2	3	3	4	6	6	8	8	14
HAMILTON COUNTY OHIO	1	54	35		142	26	2	3	4	5	6	8	13	63	91
TONKA BAY MINN	1	54	9		8	5	1	3	4	5	5	5	6	7	7
DENVER COUNTY COLO	1	54 55	10	16	71	40	16	23	26	36	37	39	49	52	69
SALT LAKE CO UTAH	1	54	5		152	40			1	1	1	1	52	52	156
MULTNOMAH CNTY ORE	1	54	12	4	121	49	4	4	31	33	34	39	69	91	104
GRAND TOTAL		54 56	148		281	59	3	4	6	23	44	60	75	98	149
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12	22	73	44	22	24	39	39	42	45	46	60	62

TABLE 8. SULFATES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		262	268	279	383	324	111	183	151	183	272	290	300
AVERAGE		184	241	214	240	200	94	156	118	183	206	256	290
MINIMUM		107	215	162	145	111	77	129	74	183	134	222	280
BOSTON MASS	55 57												
NUMBER OF SAMPLES		2	2	5	1	1	2	2	4	1	2	2	1
MAXIMUM		120	139	150	59	64	87	81	144	38	122	159	153
AVERAGE		77	126	106	59	64	69	80	105	38	107	143	153
MINIMUM		35	114	65	59	64	52	80	60	38	92	127	153
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		173	115	109	35	225	98	65	88	85	80	130	211
AVERAGE		101	82	72	35	145	60	49	82	76	80	130	170
MINIMUM		50	62	50	35	65	32	35	76	68	80	130	130
MANCHESTER N H	57												
NUMBER OF SAMPLES			1	2	2	2	1	1	2	1	2	1	2
MAXIMUM			59	99	104	135	98	31	124	85	273	90	113
AVERAGE			59	96	88	99	98	31	109	85	234	90	67
MINIMUM			59	94	72	64	98	31	94	85	195	90	22
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		120	121	291	330	125		115	119	101		186	258
AVERAGE		101	101	163	189	125		115	106	101		156	208
MINIMUM		90	81	9	123	125		115	93	101		186	159
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		294	404	434	255	133	226	201	99		175		93
AVERAGE		247	269	237	185	109	226	161	99		172		93
MINIMUM		201	167	56	7	85	226	120	99		169		93
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		297	327	269	131		81	129	139	189	168		225
AVERAGE		260	273	204	122		81	129	75	134	123		196
MINIMUM		223	193	85	114		81	129	11	79	79		167
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		189	91	277	298			100	99		169	249	147
AVERAGE		119	91	154	147			100	86		154	166	122
MINIMUM		85	91	5	48			100	73		139	120	98
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		187	380	90	64	64	84	180	108		249	276	324
AVERAGE		163	246	90	64	64	84	175	108		249	276	180
MINIMUM		151	112	90	64	64	84	171	108		249	276	94
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		200	250	366	180		157	197	208	159		270	318
AVERAGE		160	233	248	144		144	194	172	159		270	265
MINIMUM		121	205	167	114		132	191	136	159		270	212
NEW YORK N Y	54 57												
NUMBER OF SAMPLES		5	7	8	8	5	9	7	5	6	6	7	7
MAXIMUM		465	308	406	348	237	340	361	260	370	510	485	383
AVERAGE		299	243	213	170	169	228	305	177	250	339	303	288
MINIMUM		179	157	5	10	43	155	232	72	126	234	260	154
BUFFALO N Y	57												
NUMBER OF SAMPLES		2	2	2	2	1	3	1	1	2	1	1	1
MAXIMUM		148	170	266	204	60	317	198	82	88	117	124	117
AVERAGE		135	166	182	178	60	204	198	82	72	117	124	117
MINIMUM		123	163	99	152	60	138	198	82	57	117	124	117
PHILADELPHIA PA	54 57												
NUMBER OF SAMPLES		27	32	35	32	27	27	35	35	41	39	47	53
MAXIMUM		878	545	630	477	733	422	370	309	465	536	519	799
AVERAGE		314	293	258	218	209	186	213	173	182	223	243	391
MINIMUM		8	108	4	9	14	55	53		53	84	55	161
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			115	112	78	116			105	118	153	111	
AVERAGE			115	112	63	103			105	88	106	111	
MINIMUM			115	112	49	97			105	59	59	111	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			164	116	94	163		249	188	215	138	241	278
AVERAGE			164	116	94	136		212	188	130	124	194	210
MINIMUM			164	116	94	110		175	188	93	110	148	143
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			153		259	124	212	217	228	266	66		118
AVERAGE			153		173	99	153	216	187	172	66		118
MINIMUM			153		87	75	95	215	127	89	66		118

TABLE 8. SULFATES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		132	82	130	85	144	93	65		166	84	104	69
AVERAGE		88	82	96	55	108	93	65		118	71	82	60
MINIMUM		53	82	63	38	73	93	65		53	53	61	50
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		99	144	239			311	254		231	185	388	120
AVERAGE		73	69	213			192	226		173	144	248	120
MINIMUM		44	29	164			77	198		115	104	108	120
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			237	143	196	215	284	161	143	222	265	204	200
AVERAGE			184	143	162	193	206	161	143	200	193	169	151
MINIMUM			134	143	128	181	129	161	143	161	121	125	102
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	6	1	5	6	6	4	7	6	3	1	
MAXIMUM		241	252	93	140	226	206	261	245	179	274	183	
AVERAGE		241	153	93	47	101	62	126	118	97	130	183	
MINIMUM		241	27	93	5	5	1	59	13	8	3	183	
LOUISVILLE KY	54 57												
NUMBER OF SAMPLES		2	3	2	7	3	4	13	13	12	6	1	6
MAXIMUM		105	155	180	157	32	300	335	283	415	340	159	300
AVERAGE		101	115	155	41	15	127	208	172	155	163	159	168
MINIMUM		97	65	130	2	5	5	85	73	9	39	159	69
BALTIMORE MD	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	2	3	1			
MAXIMUM		254	153	197	241	65	127	95	141	106			
AVERAGE		174	145	168	156	65	108	63	74	106			
MINIMUM		94	138	140	10	65	90	32	31	106			
CHARLOTTE NC	57												
NUMBER OF SAMPLES		2	2	2	2	2	3	2	2	2	1	2	3
MAXIMUM		99	89	141	106	82	69	51	115	67	113	86	94
AVERAGE		93	79	109	101	70	47	45	102	48	113	72	68
MINIMUM		87	70	77	97	58	29	40	89	29	113	58	29
NORFOLK VA	57												
NUMBER OF SAMPLES		2	2	3	1	2	2	3	1	1	1	3	2
MAXIMUM		183	218	196	105	234	103	130	121	112	102	135	122
AVERAGE		155	173	168	105	190	99	103	121	112	102	112	111
MINIMUM		128	128	143	105	147	96	62	121	112	102	84	101
CHARLESTON W VA	54 57												
NUMBER OF SAMPLES			1	4	5	5	3	2	1	1	3	2	1
MAXIMUM			371	311	199	350	250	284	234	305	366	85	461
AVERAGE			371	168	58	152	120	225	234	305	207	63	461
MINIMUM			371	53		5	2	167	234	305	72	41	461
TAMPA FLA	54 57												
NUMBER OF SAMPLES		3	3	5	6	5	2	2	2	3	1	2	1
MAXIMUM		90	150	142	131	134	95	81	83	124	108	112	173
AVERAGE		66	73	49	61	51	48	74	73	88	108	104	173
MINIMUM		24	3	5	5		1	67	64	69	108	96	173
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	3	6	5	3	1	3	1		1	1	1
MAXIMUM		332	133	110	84	66	126	101	94		119	70	148
AVERAGE		332	46	50	34	37	126	61	94		119	70	148
MINIMUM		332	1	5	3	6	126	36	94		119	70	148
CHATTANOOGA TENN	55 57												
NUMBER OF SAMPLES		3	5	3	2	2		1	4	4	5	3	2
MAXIMUM		321	153	138	114	137		146	145	167	220	91	275
AVERAGE		195	102	113	96	117		146	123	141	139	85	209
MINIMUM		90	52	91	79	98		146	104	112	108	76	144
NASHVILLE TENN	57												
NUMBER OF SAMPLES		4	2	2	2	3	2	2	2	3	1		
MAXIMUM		154	128	180	68	31	34	76	97	77	76		
AVERAGE		111	83	113	51	18	34	44	63	51	76		
MINIMUM		69	39	47	34	9	34	12	29		76		
CHICAGO ILL	54 57												
NUMBER OF SAMPLES		5	7	7	3	12	20	14	9	8	16	13	8
MAXIMUM		254	435	252	248	410	358	328	318	318	486	540	417
AVERAGE		210	301	186	202	121	137	190	154	218	209	245	284
MINIMUM		168	142	128	144		2	92	67	108	88	76	93
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		317	186	315	250	93	185	292	276	217	77	168	264
AVERAGE		243	166	210	216	83	147	292	178	168	77	152	211
MINIMUM		199	147	105	183	74	119	292	126	136	77	137	131
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		466	289	456	492	267	336	266	174	208	295	293	316
AVERAGE		286	208	296	313	193	195	172	128	130	168	172	178
MINIMUM		134	130	130	64	93	114	78	87	32	98	79	78

TABLE 8. SULFATES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{4}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
INDIANAPOLIS IND	57												
NUMBER OF SAMPLES		1	2	1	2	3	2	2	2	2	4	2	2
MAXIMUM		131	170	85	192	120	116	259	232	136	176	130	112
AVERAGE		131	151	85	175	86	110	212	208	93	121	113	111
MINIMUM		131	132	85	159	48	104	166	184	50	82	97	110
DETROIT MICH	53 54												
NUMBER OF SAMPLES			2	3	4	2	1					21	
MAXIMUM			134	29	148	7	462					222	
AVERAGE			129	21	91	3	462					74	
MINIMUM			124	12	8		467						
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	8	52	20	22	19	8	9	12	8	3	6
MAXIMUM		198	137	324	301	238	270	176	138	358	230	159	172
AVERAGE		156	60	82	52	53	83	52	49	92	104	80	84
MINIMUM		118	18	2	2	3	2	5	1	2	6	6	14
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	2	3	2
MAXIMUM		175	290	138	215	282	63	120	178	147	314	294	144
AVERAGE		132	237	107	150	258	63	116	141	139	257	219	126
MINIMUM		89	185	76	111	234	63	113	104	132	201	104	108
CLEVELAND OHIO	57												
NUMBER OF SAMPLES		2	3	2	1	3	2	2	2	2	2	3	2
MAXIMUM		245	395	169	210	165	147	259	302	208	202	315	186
AVERAGE		191	315	128	210	124	118	237	251	139	141	217	146
MINIMUM		138	156	88	210	95	89	215	200	71	80	145	106
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		104	274	141	215	91	44	212	105	96	120		
AVERAGE		63	173	112	161	83	44	153	102	96	120		
MINIMUM		22	73	84	113	75	44	94	100	96	120		
DES MOINES IOWA	57												
NUMBER OF SAMPLES		2	2	2	2	3	2	2	2	2	2	7	3
MAXIMUM		208	425	159	135	99	82	103	129	188	115	143	80
AVERAGE		169	358	134	100	88	70	95	82	120	93	143	54
MINIMUM		171	292	110	66	82	58	87	35	53	72	143	35
WICHITA KANSAS	57												
NUMBER OF SAMPLES		2	3	1	3	1	3	2	2	1	2	3	2
MAXIMUM		59	81	66	55	49	64	105	126	68	167	68	87
AVERAGE		44	52	66	41	49	51	79	97	68	118	46	76
MINIMUM		29	35	66	28	49	40	54	69	68	70	27	65
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	3	4	5	4	3		5	4	3	2	1
MAXIMUM		317	133	120	189	19	57		153	90	142	154	190
AVERAGE		317	48	35	45	11	29		106	69	125	129	190
MINIMUM		317	3	3	5	5	4		65	24	109	105	190
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	3	8	7	5	3	2	4	1	1	1	1
MAXIMUM		310	234	215	102	59	124	125	217	59	75	118	290
AVERAGE		234	110	68	38	37	56	76	143	59	75	118	290
MINIMUM		183	4	5	3	6	2	28	77	59	75	118	290
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		3	3	2	2	3	1	2	3	2
MAXIMUM		316	439		267	354	149	170	270	176	236	248	346
AVERAGE		276	399		182	238	130	133	212	176	153	195	288
MINIMUM		237	360		125	107	112	96	101	176	71	148	231
BISMARCK ND	57												
NUMBER OF SAMPLES		2	2	1	2	2	2	2	3	1	3	2	1
MAXIMUM		39	68	56	91	36	73	53	65	24	44	148	38
AVERAGE		34	61	56	71	34	45	41	50	24	28	98	38
MINIMUM		30	54	56	51	32	18	30	41	24	20	55	38
NEW ORLEANS LA	54 57												
NUMBER OF SAMPLES		3	5	5	4	6	6	6	4	4	3	5	3
MAXIMUM		119	88	86	72	108	58	115	97	82	74	124	136
AVERAGE		106	67	49	64	61	35	50	60	52	39	64	117
MINIMUM		84	22	12	49	2	1	24	25	29	9	42	94
TULSA OKLA	57												
NUMBER OF SAMPLES		3		2	1	2	1		3	1	2	2	2
MAXIMUM		126		53	50	44	34		103	88	102	41	41
AVERAGE		78		47	50	26	34		69	88	89	33	30
MINIMUM		39		42	50	8	34		42	88	77	25	19
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	4	3	4	5	2	2	2	2	3	2	3
MAXIMUM		151	83	118	71	123	77	79	45	74	68	101	101
AVERAGE		118	47	61	21	65	66	70	35	55	47	80	74
MINIMUM		86	6	9		2	56	61	25	37	35	59	49

TABLE 8. SULFATES—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
HOUSTON TEXAS	54 57												
NUMBER OF SAMPLES		3	7	9	7	8	14	7	3	6	6	9	7
MAXIMUM		104	320	215	95	185	160	109	196	268	108	175	336
AVERAGE		62	91	89	53	76	52	56	98	160	63	58	175
MINIMUM			5	5				15	13	36	18	25	94
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	3	4	2	4	4	4	7	5	4	2	3
MAXIMUM		196	68	100	80	127	110	55	175	109	123	79	89
AVERAGE		92	45	62	61	86	64	22	73	73	67	78	76
MINIMUM		35	3	16	42		8	6	6	35	33	78	63
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		48	86	132	85	75	47	69	46	61	75	82	273
AVERAGE		42	80	109	68	62	20	63	45	42	53	82	138
MINIMUM		36	74	87	52	50	2	58	45	23	32	82	4
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		247	254	152	127	88	111	93	109	105	250	139	374
AVERAGE		216	207	122	98	84	28	76	102	89	188	134	204
MINIMUM		179	149	92	70	81		60	95	74	126	130	98
CHEYENNE WYO	57												
NUMBER OF SAMPLES		2	2	2	3	1	3	3	2	2	1	2	3
MAXIMUM		81	45	50	69	48	75	56	123	60	33	73	56
AVERAGE		55	40	48	57	48	55	52	86	54	33	67	41
MINIMUM		30	36	47	50	48	39	46	50	48	33	61	26
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	4	4	8	3	7	1	3	3	3	1	3
MAXIMUM		74	199	67	123	89	176	6	39	4	48	62	72
AVERAGE		74	73	33	38	41	82	6	15	3	17	62	24
MINIMUM		74	7	18		5	6	6	2	2	1	62	1
LOS ANGELES CALIF	54 57												
NUMBER OF SAMPLES		2	3	6	5	8	4	4	2	1	2	2	1
MAXIMUM		121	242	281	204	249	185	170	185	148	172	266	131
AVERAGE		101	211	135	102	102	95	120	184	148	167	164	131
MINIMUM		81	196	33	4			50	184	148	162	63	131
SAN FRANCISCO CALIF	55 57												
NUMBER OF SAMPLES		4	3	3	1	3	2	5	2	3	3	5	1
MAXIMUM		216	60	62	108	74	74	78	57	73	122	167	205
AVERAGE		138	54	47	108	63	71	48	56	55	92	105	205
MINIMUM		23	44	35	108	58	69	24	56	46	59	62	205
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		5	7	7	7	6	9	8	3	4	6		
MAXIMUM		410	256	207	189	346	321	269	267	558	565		
AVERAGE		217	121	116	88	227	145	161	167	244	331		
MINIMUM			1	13	6	124	3	20	78	22	141		
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		2	2	2	3	2	3	4	5	4
MAXIMUM		176	250		7	9	5	3	8	4	6	74	97
AVERAGE		74	82		6	4	4	2	5	3	4	17	32
MINIMUM		6	4		5		4	2	2	3	2	2	2
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	4	2	5	5	5	5	6	4	7	6
MAXIMUM		232	111	85	11	107	140	130	122	229	74	187	105
AVERAGE		83	44	46	11	53	66	67	69	75	22	38	31
MINIMUM		3	4	5	11		7	2	2	3	2	3	1
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		77	45	63	75	101	110	93	121	85	115	151	64
AVERAGE		54	45	54	75	101	99	72	73	85	103	86	64
MINIMUM		15	45	46	75	101	88	53	43	85	86	49	64
HONOLULU HAWAII	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	3	3	2	1	3	2
MAXIMUM		184	73	90	63	61	46	52	46	41	30	42	39
AVERAGE		119	64	69	48	53	46	37	34	37	30	36	37
MINIMUM		54	56	49	39	45	46	25	29	33	30	30	36
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	2	9	4	3		2	7	5	21	20	
MAXIMUM		202	5	176	43	11		103	184	176	388	295	
AVERAGE		202	4	43	16	8		96	108	133	142	144	
MINIMUM		202	4	7	2	5		89	60	69	2	1	
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		62	26	71	59	45		28	2	76	34		
AVERAGE		40	20	71	29	19		22	2	28	34		
MINIMUM		18	15	71		1		16	2	2	34		

TABLE 8. SULFATES—SUBURBAN STATIONS AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	1
MAXIMUM		146	75	102		48	101	43	57	88	51	123	79
AVERAGE		96	75	67		48	67	38	48	74	51	97	59
MINIMUM		47	75	32		48	44	33	43	54	51	71	41
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM		144	78	137	225	75	107	55		145	70	208	157
AVERAGE		130	78	75	146	53	107	55		102	70	179	157
MINIMUM		117	78	12	96	31	107	55		59	70	151	157
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2	1	5	3	3	1		2	1	1
MAXIMUM		63	257	101	186	281	192	234	204		157	68	94
AVERAGE		63	191	86	186	107	85	155	204		118	68	94
MINIMUM		63	95	72	186		6	89	204		79	68	94
HAMILTON COUNTY OHIO	54												
NUMBER OF SAMPLES				4	2	5	3	4	4	4	4	3	2
MAXIMUM				142	69	65	107	14	6	10	8	7	2
AVERAGE				104	41	26	63	9	4	5	4	5	1
MINIMUM				62	13	3	5	6	3	3		4	
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			63	38	51			35		24	71	47	16
AVERAGE			63	38	51			35		23	55	47	16
MINIMUM			63	38	51			35		22	39	47	16
NONURBAN													
PT WORONZOF ALASKA	55 56												
NUMBER OF SAMPLES		1		1	1	2		1	2	1	1	1	1
MAXIMUM		62		22	45	46		73	39	24	48	60	42
AVERAGE		62		22	45	43		73	32	24	48	60	42
MINIMUM		62		22	45	39		73	25	24	48	60	42

TABLE 9. BARIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14		30	10		1	1	1	10	10	20	21	23
	1	56	22		40	10			1	1	7	10	11	22	29
	1	55 56	36		40	10			1	1	9	10	20	22	23
BOSTON MASS	1	55	23		60	6				1	1	1	1	7	23
EVERETT MASS	1	55	26		100	19		1	1	1	6	11	23	41	53
ELIZABETH N J	1	55 56	20		5						1	1	1	1	1
PAULSBORO N J	1	55 56	23								1	1	1	1	1
CAMDEN N J	1	55 56	19		9						1	1	1	1	1
PERTH AMBOY N J	1	55 56	21		10						1	1	1	1	1
TRENTON N J	1	55 56	16		39	6				1	1	1	1	14	19
JERSEY CITY N J	1	55 56	21		52	8				1	1	1	7	16	31
NEW YORK N Y	2	55 56	39		140	10			1	1	1	1	7	17	29
	3	54 55	18		140	10				1	1	1	6	7	14
		54 56	21		39	10			1	1	1	13	17	27	31
PHILADELPHIA PA	1	55	94		53	6				1	1	1	6	12	23
	1	56	11		11	3				1	1	1	7	8	10
	1	55 56	105		536	6				1	1	1	6	11	21
	4	56	11		74	10			1	1	1	5	11	14	17
	5	56	9		5	1				1	1	1	1	1	4
	6	56	11		37	4				1	1	1	1	5	6
	7	56	11		50	8			1	1	6	7	10	11	12
		55	94		53	6				1	1	1	6	12	23
		56	53		74	5				1	1	1	5	8	12
		55 56	147		74	6				1	1	1	5	10	18
ALTOONA PA	1	56	13		20	4			1	1	1	1	7	9	11
BRISTOL PA	1	55 56	18		15						1	1	1	1	1
CHESTER PA	1	55 56	18		33	5				1	1	1	6	10	17
ERIE PA	1	56	25		100	16			1	1	6	7	22	28	31
PITTSBURGH PA	[illegible]	56	21		70	20	1	6	8	10	21	22	28	31	40
WILLIAMSPORT PA	1	55 56	23		60	18		1	1	1	20	22	28	31	53
WASHINGTON DC	2	55 56	17		40	14	1	1	6	10	20	20	21	22	23
LOUISVILLE KY	1	54	17		95	33	3	3	8	14	31	38	42	54	57
	1	55	21		66	18		1	2	3	6	8	23	42	62
	1	54 55	38		95	25	1	2	3	6	8	27	39	52	62
	2	54	13		3	1		1	1	1	1	2	2	2	3
	2	55	10		5	1			1	1	1	1	2	2	3
	2	54 55	23		5	1			1	1	1	2	2	2	3
		54	31		95	19		1	2	2	3	12	27	40	54
		55	31		66	12		1	1	2	2	3	6	23	59
		54 55	62		95	16		1	1	2	3	6	12	38	57
CHARLESTON W VA	4	55	16		100	31		1	1	10	11	39	42	66	77
TAMPA FLA	1	55	21		50	18		1	1	1	21	28	29	31	42
ATLANTA GA	1	55 56	16		200	45	1	1	21	21	23	42	53	66	89
CHATTANOOGA TENN	3	55	14		55	14		1	1	6	7	10	23	29	42
	4	55 56	18		100	31	1	10	10	28	29	30	31	42	66
		55 56	32		100	23		1	7	10	23	28	30	39	57
CHICAGO ILL	1	55	28		100	17			1	1	6	11	23	31	53
	2	55	20		100	43	1	11	31	38	41	53	60	66	83
	4	55	29		100	12			1	1	5	6	9	11	42
		55	77		100	22		1	1	5	10	20	37	51	64
EAST ST LOUIS ILL	1	55 56	15	20	300	101	31	38	42	51	55	57	89	201	315
	2	55 56	14		80	28	1	8	20	21	22	23	31	42	66
		55 56	29		300	66	8	21	23	31	41	51	55	77	201

TABLE 9. BARIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55 56	19		200	39	1	5	6	10	11	21	29	42	103
	2	55 56	26		220	25		1	1	2	21	28	29	38	41
	3	55 56	21		40	11		1	1	2	6	11	21	22	29
	4	55 56	20		20	7			1	1	2	3	14	20	22
		55 56	86		220	20		1	1	4	10	20	22	29	39
CINCINNATI OHIO	1	55	23		100	31	1	12	20	22	29	30	38	42	63
MINNEAPOLIS MINN	1	54 55	21		70	20		1	6	7	20	21	23	31	57
KANSAS CITY MO	2	55 56	18	6	100	23	6	8	10	17	21	23	28	29	30
	4	55 56	9		20	6		1	1	5	5	5	6	9	11
		55 56	27		100	17	1	5	6	9	11	20	22	28	29
ST LOUIS MO	1	55 56	23		200	27		1	11	20	22	23	28	31	53
NEW ORLEANS LA	1	54 55	24		200	27		1	8	9	10	11	21	23	96
	2	54 55	22		300	50	1	5	10	11	20	23	31	66	201
		54 55	46		300	38	1	4	9	10	11	21	23	42	98
FT WORTH TEXAS	1	54 55	24		40	7				1	1	1	11	21	23
HOUSTON TEXAS	1	54 55	64		1500	73	1	3	4	6	10	20	23	39	77
BELLAIRE TEXAS	1	54 55	31		1400	186	1	3	5	10	21	23	38	42	1198
DENVER COL	1	54 55	23	2	100	29	2	10	11	20	22	23	39	42	57
SALT LAKE CITY UTAH	2	54 55	26		70	16	1	3	4	6	10	11	22	29	31
ANCHORAGE ALASKA	1	54 55	13		700	111			1	1	1	11	21	23	528
SAN FRANCISCO CALIF	1	55 56	32		50	9			1	1	4	8	10	21	23
PASADENA CALIF	1	55 56	20		30	8		1	1	5	8	9	10	11	21
SAN JOSE CALIF	1	55 56	25		42	8			1	1	1	8	10	11	34
SAN LEANDRO CALIF	1	55 56	30		300	38	1	1	10	19	21	22	28	39	96
PORTLAND OREGON	1	54 55	20		50	20	1	5	10	11	21	23	28	30	31

TABLE 9. BARIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		40	10			1	1	9	10	20	22	23
MASSACHUSETS TOTAL	55	49		100	13			1	1	1	6	11	23	42
NEW JERSEY TOTAL	55 56	120		52	2					1	1	1	1	7
NEW YORK TOTAL	54 56	39		140	10			1	1	1	1	7	17	29
PENNSYLVANIA TOTAL	55 56	265		100	9			1	1	1	1	9	18	29
DIS COLUMBIA TOTAL	55 56	17		40	14	1	1	6	10	20	20	21	22	23
KENTUCKY TOTAL	54 55	62		95	16		1	1	2	3	6	12	38	57
WEST VIRGINA TOTAL	55	16		100	31		1	1	10	11	39	42	66	77
FLORIDA TOTAL	55	21		50	18		1	1	1	21	28	29	31	42
GEORGIA TOTAL	55 56	16		200	45	1	1	21	21	23	42	53	66	89
TENNESSEE TOTAL	55 56	32		100	23		1	7	10	23	28	30	39	57
ILLINOIS TOTAL	55 56	106		300	34		1	1	10	21	30	41	55	77
INDIANA TOTAL	55 56	86		220	20		1	1	4	10	20	22	29	39
OHIO TOTAL	55	23		100	31	1	12	20	22	29	30	38	42	63
MINNESOTA TOTAL	54 55	21		70	20		1	6	7	20	21	23	31	57
MISSOURI TOTAL	55 56	50		200	22	1	5	8	11	20	21	23	29	39
LOUISIANA TOTAL	54 55	46		300	38	1	4	9	10	11	21	23	42	98
TEXAS TOTAL	54 55	119		1500	89		1	3	5	10	20	22	38	73
COLORADO TOTAL	54 55	23	2	100	29	2	10	11	20	22	23	39	42	57
UTAH TOTAL	54 55	26		70	16	1	3	4	6	10	11	22	29	31
ALASKA TOTAL	54 55	13		700	111			1	1	1	11	21	23	528
CALIFORNIA TOTAL	55 56	107		300	16		1	1	4	8	10	20	22	31
OREGON TOTAL	54 55	20		50	20	1	5	10	11	21	23	28	30	31
NEW ENGLND TOTAL	55 56	85		100	12			1	1	5	10	19	22	38
MID ATLNTC TOTAL	54 56	424		140	7				1	1	1	5	12	27
MID EAST TOTAL	54 56	95		100	18		1	1	2	6	11	22	38	59
SOUTH EAST TOTAL	55 56	69		200	27		1	7	11	23	28	30	41	57
MID WEST TOTAL	55 56	215		300	28		1	2	9	20	22	30	41	64
GRT PLAINS TOTAL	54 56	71		200	21	1	1	7	10	20	21	23	29	51
GULF SOUTH TOTAL	54 55	165		1500	75	1	1	4	7	10	20	23	39	98
ROCKY MNTN TOTAL	54 55	49		100	22	2	3	7	10	19	21	28	38	53
PAC COAST TOTAL	54 56	140		700	26		1	1	5	9	11	21	23	36
GRAND TOTAL	54 56	1313		1500	25			1	1	6	11	21	29	50

TABLE 9. BARIUM— SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS		55	23		50	9			1	1	8	9	10	20	23
LAKEHURST N J	1	55 56	17								1	1	1	1	1
KANAWHA CO W VA	1	55	17		60	14			1	1	1	11	22	31	42
DENVER COUNTY COLO	1	54 55	10		90	28	1	1	11	21	23	29	31	39	42
GRAND TOTAL		54 56	67		90	11			1	1	1	8	11	22	31
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		20										20

TABLE 9. BARIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM				10	20	20	10	30	30	10	40	30	20
AVERAGE				4	4	20	3	15	17	10	12	23	10
MINIMUM						20		7	10	10		20	
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		30				6	20	10		60	20		
AVERAGE		30				6	10	5		60	13		
MINIMUM		30				6				60	7		
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		10	60	40	40	100	50	5	20	20	40		50
AVERAGE		6	33	13	40	50	18	1	10	13	40		30
MINIMUM					40					6	40		10
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		1	3	1	4	1	7	4	4	2	3	4	5
MAXIMUM		31	14		140	19	14	7	24	36	39	29	16
AVERAGE		31	4		35	19	4	3	12	18	13	7	3
MINIMUM		31				19							
PHILADELPHIA PA	55 56												
NUMBER OF SAMPLES		17	13	13	13	18	12	13	13	10	8	8	9
MAXIMUM		52	15	22	53	74	37	26	35	11		10	13
AVERAGE		15	4	5	5	6	6	4	3	1		2	2
MINIMUM													
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		20			6	6				30	30	30	100
AVERAGE		13			2	3				10	20	18	70
MINIMUM												7	20
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		20	40	70			20			40	30	30	40
AVERAGE		12	20	36			15			22	25	25	40
MINIMUM		8	10	10			6			5	20	20	40
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			60	50	50	30		20	30	40		20	6
AVERAGE			33	50	25	23		20	30	23		6	3
MINIMUM				50		20		20	30				
WASHINGTON DC	55 56												
NUMBER OF SAMPLES		1	2		1	3	2	1	3	2	1	1	
MAXIMUM		10			20	20	40	20	20	10	20		
AVERAGE		10			20	13	35	20	15	8	20		
MINIMUM		10			20		30	20	6	7	20		
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	1	1	3	13	13	12	6	1	6
MAXIMUM		2	39	35	6	23	95	61	57	87	60	8	56
AVERAGE		1	16	35	6	23	60	19	8	10	19	8	15
MINIMUM			3	35	6	23	20				2	8	
CHARLESTON W VA	55												
NUMBER OF SAMPLES			1	1		2	2	2	1	1	3	2	1
MAXIMUM			50	60		40	90	10	70	100	40	10	
AVERAGE			50	60		20	50	5	70	100	20	5	
MINIMUM			50	60			10		70	100			
TAMPA FLA	55												
NUMBER OF SAMPLES		2	1	1	3	2	1	2	2	3	1	2	1
MAXIMUM		30	50		30		20	30	40	50	20		7
AVERAGE		15	50		20		20	15	35	33	20		7
MINIMUM			50				20		30	10	20		7
ATLANTA GA	55 56												
NUMBER OF SAMPLES		1	1	3	2	1	1	3	1		1	1	1
MAXIMUM		200	50	50	40		20	20	80		100	60	40
AVERAGE		200	50	30	20		20	13	80		100	60	40
MINIMUM		200	50	20			20		80		100	60	40
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			38	30	29	70		10	30	30	60	50	100
AVERAGE			23	16	14	50		10	17	16	31	20	53
MINIMUM				10		30		10					7
CHICAGO ILL	55												
NUMBER OF SAMPLES		2	3	6	3	8	11	9	6	4	10	10	5
MAXIMUM			80	60	80	100	70	40	100	60	100	60	40
AVERAGE			40	15	46	18	12	6	45	37	36	21	9
MINIMUM			10						20				
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		50	50	200	80	60	50	200	70	300		80	300
AVERAGE		29	35	115	40	40	36	200	50	113		55	126
MINIMUM		8	20	30		20	20	200	30	20		30	40

TABLE 9. BARIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		30	30	200	20	220	40	30	40	30	200	50	20
AVERAGE		8	8	27	4	68	12	11	20	22	68	13	7
MINIMUM						2				20	20		
CINCINNATI OHIO	55												
NUMBER OF SAMPLES		2		2	2	2	2	2	3	2	2	2	2
MAXIMUM		30		60	40	50	66	30	40	42	59	20	100
AVERAGE		18		40	28	25	43	18	30	21	43	16	65
MINIMUM		7		20	17		20	6	20		28	12	30
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	1	1	1		2		5	4	3	2	1
MAXIMUM		20	10	70	20		20		60	30	50	30	7
AVERAGE		20	10	70	20		10		23	16	23	15	7
MINIMUM		20	10	70	20					7			7
KANSAS CITY MO	55 56												
NUMBER OF SAMPLES		4	2	3	3	3	2	2	4	1	1	1	1
MAXIMUM		21	30	16	20	20	30	9	100	5	6	20	30
AVERAGE		11	28	10	13	8	19	8	40	5	6	20	30
MINIMUM			27	6	10		8	8		5	6	20	30
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		20	50			20	40	30	50	30		20	200
AVERAGE		20	40			6	30	15	30	30		16	120
MINIMUM		20	30				20		20	30		10	40
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	4	4	6	4	4	4	5	3
MAXIMUM		100	200	10	40	60	40	90	40	200	100	300	200
AVERAGE		50	75	6	17	16	20	24	21	57	35	74	83
MINIMUM			5		9		10		5		10		
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			5	6	4	5	6	7	3	6	6	9	7
MAXIMUM			43	70	10	270	5	40	38	190	73	50	1500
AVERAGE			21	15	4	57	3	13	15	88	22	26	442
MINIMUM			3	3		3			3	7		2	
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	2	2	2	3	3	4	2	3
MAXIMUM		40	9	20	10	10		1400	1300	70	200	10	20
AVERAGE		14	6	20	7	9		1300	843	50	75	6	9
MINIMUM		2	4	20	5	9		1200	30	40	20	2	3
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	1	2
MAXIMUM		20	20	100	10	50	40	10	90	40	40	50	20
AVERAGE		20	11	75	10	30	21	6	65	30	30	50	11
MINIMUM		20	2	50	10	10	3	3	40	20	20	50	3
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	2	2	2	2	2	2	2	2	2	2	3
MAXIMUM		40	30	20	4	7	4	7	70	30	10	30	20
AVERAGE		15	20	11	2	5	4	3	60	20	6	30	16
MINIMUM			10	3		3	4		50	10	3	30	10
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM			20	10	30	20	20	50	10	20	5	5	
AVERAGE			14	5	30	16	15	21	5	6	1	1	
MINIMUM			8		30	8	10						
PASADENA CALIF	55 56												
NUMBER OF SAMPLES		2	2	1	3	3	2	3		2	2		
MAXIMUM			10	9	30	20	5	10		9	5		
AVERAGE			5	9	20	12	2	8		4	2		
MINIMUM				9	10			8					
SAN JOSE CALIF	55 56												
NUMBER OF SAMPLES		1	2	2		3	3	3	3	2	1	2	3
MAXIMUM		8				20	20	10	34	42	10		8
AVERAGE		8				10	6	3	25	21	10		2
MINIMUM		8							10		10		
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		10	20	20	20	20	40	300	30	30	100	50	
AVERAGE		5	20	10	20	20	40	150	25	30	43	15	
MINIMUM			20		20	20	40		20	30	10		
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1		3	1			2	7	5	1		
MAXIMUM		30		30	10			20	50	50	10		
AVERAGE		30		13	10			20	23	22	10		
MINIMUM		30			10			20			10		

TABLE 9. BARIUM—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		9	9	50		10	9		30	20	10	20	20
AVERAGE		4	9	25		10	3		13	13	10	10	6
MINIMUM			9			10					10		
KANAWHA CO # VA	55												
NUMBER OF SAMPLES		1	3	2		2	1	3	1		2	1	1
MAXIMUM			50	30		60			40		20	20	
AVERAGE			16	25		35			40		10	20	
MINIMUM				20		10			40			20	
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			20					40		90	30	20	10
AVERAGE			20					40		65	30	20	10
MINIMUM			20					40		40	30	20	10

TABLE 10. BISMUTH—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14		3	2	1	1	1	2	2	2	2	2	3
	1	56	22		3	1		1	1	1	1	2	2	2	3
	1	55 56	36		3	1		1	1	1	1	2	2	2	3
BOSTON MASS	1	55	23								1	1	1	1	1
EVERETT MASS	1	55	26		4						1	1	1	1	1
ELIZABETH N J	1	55 56	20		16	2		1	1	1	1	1	2	2	3
PAULSBORO N J	1	55 56	23		6	1		1	1	1	2	2	2	3	3
CAMDEN N J	1	55 56	19	2	4	2	1	1	2	2	2	2	3	3	3
PERTH AMBOY N J	1	55 56	21		9	2	1	1	1	2	2	3	3	4	5
TRENTON N J	1	55 56	16		7	2	1	1	1	1	2	2	2	2	3
JERSEY CITY N J	1	55 56	21		19	3	1	1	1	2	2	2	3	3	3
NEW YORK N Y	2	55 56	21		6	2	1	1	2	2	2	3	3	4	5
	3	54 55	18	2	25	5	2	2	2	3	4	4	5	5	6
		54 56	39		25	3	1	2	2	2	3	3	4	5	6
PHILADELPHIA PA	1	55	94		6	2	1	1	1	2	2	2	2	3	3
	1	56	11		3	1		1	1	1	1	2	2	2	3
	1	55 56	105		6	2	1	1	1	2	2	2	2	3	3
	4	56	11		6	1			1	1	1	1	2	2	2
	5	56	9		2				1	1	1	1	1	1	2
	6	56	11		2	1			1	1	1	1	2	2	2
	7	56	11		3	1			1	1	1	2	2	2	3
		55	94		6	2	1	1	1	2	2	2	2	3	3
		56	53		6	1			1	1	1	1	2	2	2
		55 56	147		6	1		1	1	1	2	2	2	2	3
ALTOONA PA	1	56	13		2	1	1	1	1	1	2	2	2	2	2
BRISTOL PA	1	55 56	18		2	1		1	1	1	1	1	2	2	2
CHESTER PA	1	55 56	18		4	2	1	1	1	2	2	2	2	2	3
ERIE PA	1	56	25		3	1			1	1	1	1	2	2	2
PITTSBURGH PA	1	56	21		10	2	1	1	1	2	2	2	2	3	4
WILLIAMSPORT PA	1	55 56	23		4	2	1	1	1	2	2	2	2	3	3
WASHINGTON DC	2	55 56	17		2	1			1	1	1	1	2	2	2
LOUISVILLE KY	1	54	17		5						1	1	1	1	1
	1	55	21		3						1	1	1	1	1
	1	54 55	38		5						1	1	1	1	1
	2	54	13								1	1	1	1	1
	2	55	10								1	1	1	1	1
	2	54 55	23								1	1	1	1	1
		54	31		5						1	1	1	1	1
		55	31		3						1	1	1	1	1
		54 55	62		5						1	1	1	1	1
BALTIMORE MD	1	57	18		4						1	1	1	1	1
CHARLESTON W VA	4	55	16		2						1	1	1	1	1
TAMPA FLA	1	55	21		3	1			1	1	1	1	2	2	2
ATLANTA GA	1	55 56	16		2					1	1	1	1	1	2
CHATTANOOGA TENN	3	55	14	2	3	2	1	1	1	2	2	2	2	2	3
	4	55 56	18		3	1	1	1	1	1	1	2	2	2	2
		55 56	32		3	2	1	1	1	1	2	2	2	2	3
CHICAGO ILL	1	55	28		17	1				1	1	1	1	1	4
	2	55	20		8	3		1	1	2	2	3	4	5	6
	4	55	29		10	3	1	1	2	2	3	3	4	5	6
		55	77		17	2			1	1	2	2	3	4	5

TABLE 10. BISMUTH—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST ST LOUIS ILL	1	55 56	15		4	1		1	1	1	1	1	2	2	2
	2	55 56	14								1	1	1	1	1
		55 56	29		4					1	1	1	1	1	2
EAST CHICAGO IND	1	55 56	19		20	3		1	1	2	3	3	4	5	6
	2	55 56	26		6	2		1	1	1	2	2	3	3	4
	3	55 56	21		8	2			1	1	1	2	3	4	5
	4	55 56	20		5	1			1	1	1	1	2	3	4
		55 56	86		20	2			1	1	2	2	3	4	5
CINCINNATI OHIO	1	55	23		9	2		1	1	1	2	2	2	3	3
YOUNGSTOWN OHIO	1	57	12		3					1	1	1	1	1	2
MILWAUKEE WIS	1	57	19								1	1	1	1	1
MINNEAPOLIS MINN	1	54 55	21		2						1	1	1	1	1
KANSAS CITY MO	2	55 56	18		3					1	1	1	1	1	2
	4	55 56	9								1	1	1	1	1
		55 56	27		3					1	1	1	1	1	2
ST LOUIS MO	1	55 56	23		2	1		1	1	1	1	2	2	2	2
NEW ORLEANS LA	1	54 55	24		1						1	1	1	1	1
	2	54 55	22		1						1	1	1	1	1
		54 55	46		1						1	1	1	1	1
FT WORTH TEXAS	1	54 55	24		3	1			1	1	1	1	1	2	2
HOUSTON TEXAS	1	54	8								1	1	1	1	1
	1	55	56		40						1	1	1	1	1
	1	54 55	64		40						1	1	1	1	1
BELLAIRE TEXAS	1	54	17		2						1	1	1	1	1
	1	55	14								1	1	1	1	1
	1	54 55	31		2						1	1	1	1	1
DENVER COL	1	54 55	23		3						1	1	1	1	1
SALT LAKE CITY UTAH	2	54 55	26		4						1	1	1	1	1
ANCHORAGE ALASKA	1	54 55	13		3						1	1	1	1	3
SAN FRANCISCO CALIF	1	55 56	32		1						1	1	1	1	1
PASADENA CALIF	1	55 56	20		2	1			1	1	1	1	1	2	2
SAN JOSE CALIF	1	55 56	25		3	1			1	1	1	1	2	2	2
SAN LEANDRO CALIF	1	55 56	30		2				1	1	1	1	1	2	2
PORTLAND OREGON	1	54 55	20		2						1	1	1	1	1
SEATTLE WASH	1	57	20		11	1				1	1	1	1	1	2

TABLE 10. BISMUTH—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		3	1		1	1	1	1	2	2	2	3
MASSACHUSETS TOTAL	55	49		4						1	1	1	1	1
NEW JERSEY TOTAL	55 56	120		19	2		1	1	1	2	2	2	3	3
NEW YORK TOTAL	54 56	39		25	3	1	2	2	2	3	3	4	5	6
PENNSYLVANIA TOTAL	55 56	265		10	1		1	1	1	2	2	2	2	3
DIS COLUMBIA TOTAL	55 56	17		2	1			1	1	1	1	2	2	2
KENTUCKY TOTAL	54 55	62		5						1	1	1	1	1
MARYLAND TOTAL	57	18		4						1	1	1	1	1
WEST VIRGINA TOTAL	55	16		2						1	1	1	1	1
FLORIDA TOTAL	55	21		3	1			1	1	1	1	2	2	2
GEORGIA TOTAL	55 56	16		2					1	1	1	1	1	2
TENNESSEE TOTAL	55 56	32		3	2	1	1	1	1	2	2	2	2	3
ILLINOIS TOTAL	55 56	106		17	2			1	1	1	2	2	3	5
INDIANA TOTAL	55 56	86		20	2			1	1	2	2	3	4	5
OHIO TOTAL	55 57	35		9	1			1	1	1	1	2	2	3
WISCONSIN TOTAL	57	19								1	1	1	1	1
MINNESOTA TOTAL	54 55	21		2						1	1	1	1	1
MISSOURI TOTAL	55 56	50		3				1	1	1	1	1	2	2
LOUISIANA TOTAL	54 55	46		1						1	1	1	1	1
TEXAS TOTAL	54 55	119		40						1	1	1	1	1
COLORADO TOTAL	54 55	23		3						1	1	1	1	1
UTAH TOTAL	54 55	26		4						1	1	1	1	1
ALASKA TOTAL	54 55	13		3						1	1	1	1	3
CALIFORNIA TOTAL	55 56	107		3					1	1	1	1	1	2
OREGON TOTAL	54 55	20		2						1	1	1	1	1
WASHINGTON TOTAL	57	20		11	1				1	1	1	1	1	2
NEW ENGLND TOTAL	55 56	85		4					1	1	1	1	2	2
MID ATLNTC TOTAL	54 56	424		25	2		1	1	1	2	2	2	3	3
MID EAST TOTAL	54 57	113		5						1	1	1	1	1
SOUTH EAST TOTAL	55 56	69		3	1		1	1	1	1	1	2	2	2
MID WEST TOTAL	55 57	246		20	1			1	1	1	2	2	3	5
GRT PLAINS TOTAL	54 56	71		3					1	1	1	1	1	2
GULF SOUTH TOTAL	54 55	165		40						1	1	1	1	1
ROCKY MNTN TOTAL	54 55	49		4						1	1	1	1	1
PAC COAST TOTAL	54 57	160		11					1	1	1	1	1	2
GRAND TOTAL	54 57	1382		40	1			1	1	1	1	2	2	3

TABLE 10. BISMUTH— SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23								1	1	1	1	1
LAKEHURST N J	1	55 56	17		5	1			1	1	1	1	1	2	2
KANAWHA CO W VA	1	55	17								1	1	1	1	1
DENVER COUNTY COLO	1	54 55	10								1	1	1	1	1
GRAND TOTAL		54 56	67		5						1	1	1	1	1
NONURBAN															
CP ROMANZOF ALASKA	1	55 56	10												

TABLE 10. BISMUTH— URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		2	2	2	3	3	3	2	2		3	2	3
AVERAGE		1	2	1	2	1	2	2			2	2	3
MINIMUM			2		2		1	2				2	3
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	2	5	1		1	2	1		1	2
MAXIMUM		2	2	16	2	2			2	1		2	3
AVERAGE		1	2	9	1	2			1	1		2	1
MINIMUM			2	3		2			1	1		2	
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	2	4	2	1	4	1		2		1
MAXIMUM		6	3		4	2	2	3			2		3
AVERAGE		4	1		3	1	2	1			1		3
MINIMUM		3			3		2						3
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	2	1		1	1	2	3	2		2
MAXIMUM		2	4	4	2		2	2	3	3	3		2
AVERAGE		2	3	4	2		2	2	2	3	2		2
MINIMUM		2	2	4	2		2	2	2	3	2		2
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	3	4			1	2		2	3	2
MAXIMUM		4	2	5	9				2		3	3	5
AVERAGE		3	2	4	3				1		2	3	2
MINIMUM		2	2	3							2	3	
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1		1	1	2	1		1	1	3
MAXIMUM		2	5	2		2	2	2	2		3	2	7
AVERAGE			3	2		2	2	2	2		3	2	3
MINIMUM			2	2		2	2	2	2		3	2	
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	3	3		2	2	2	1		1	2
MAXIMUM		19	4	3	3		2	2	3	2		2	3
AVERAGE		10	3	3	2		2	1	1	2		2	3
MINIMUM		2	2	3	2		2			2		2	3
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		1	3	1	4	1	7	4	4	2	3	4	5
MAXIMUM		6	3	3	7	3	5	4	4	4	6	6	25
AVERAGE		6	2	3	4	3	3	3	2	3	4	5	6
MINIMUM		6	1	3	2	3	2	3	1	2	4	3	
PHILADELPHIA PA	55 56												
NUMBER OF SAMPLES		17	13	13	13	18	12	13	13	10	8	8	9
MAXIMUM		6	3	2	3	6	3	4	4	3	3	3	4
AVERAGE		2	1	1	1	2	2	1	2	1	2	2	2
MINIMUM							2						2
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			2	2	2	2			2	2	2	2	
AVERAGE			2	2	2	2			2	1	2	2	
MINIMUM			2	2	2	2			2		2	2	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			2	2		2		2	1	2	2	2	2
AVERAGE			2	2		1		2	1	1	1	2	2
MINIMUM			2	2				2	1		1	2	2
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			2		2	2	2	2	3	4	2		2
AVERAGE			2		2	1	2	2	2	3	2		2
MINIMUM			2		2		2	2	2	2	2		2
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		2	2	2	3	2	2	1		2	1	2	1
AVERAGE		2	2	2	2	1	2	1		1		1	
MINIMUM		2	2	2	1		2	1		1		1	
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		2	2	4			3	2		3	3	10	2
AVERAGE		2	1	3			2	2		3	2	6	2
MINIMUM		2		2			2	2		3	2	2	2
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			3	3	4	3	3		2	3	4	3	2
AVERAGE			2	3	3	2	2		2	3	2	2	1
MINIMUM			2	3	2	2	2		2	3		2	
WASHINGTON DC	55 56												
NUMBER OF SAMPLES		1	2		1	3	2	1	3	2	1	1	
MAXIMUM		2	2			2	2	2	2	2	2	2	
AVERAGE		2	1				2	2		1	2	2	
MINIMUM		2					2	2			2	2	

TABLE 10. BISMUTH—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
TAMPA FLA	55												
NUMBER OF SAMPLES		2	1	1	3	2	1	2	2	3	1	2	1
MAXIMUM		2		2	3	2		3		2		2	
AVERAGE		1		2	1	2		2				2	
MINIMUM				2		2		2				2	
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM		2	2	3	2	3		2	2	3	3	3	3
AVERAGE		2	1	1	2	2		2	1	2	2	2	2
MINIMUM		2	1	1	2	2		2		2	2	2	2
CHICAGO ILL	55												
NUMBER OF SAMPLES		2	3	6	3	8	11	9	6	4	10	10	5
MAXIMUM		2	5	5	4	6	7	3	5	7	17	5	6
AVERAGE		1	4	2	2	2	2	1	1	5	4	1	2
MINIMUM			4							2			
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		2		4	2		2	2	2	2			
AVERAGE		1		2	1			2					
MINIMUM								2					
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		6	5	5	4		6	20	5	5	8	6	7
AVERAGE		2	3	2	1		1	4	2	1	4	2	2
MINIMUM											1		
CINCINNATI OHIO	55												
NUMBER OF SAMPLES		2		2	2	2	2	2	3	2	2	2	2
MAXIMUM		2		7	3	3		2	3	2	9	3	3
AVERAGE		2		5	2	1		2	1	1	4	2	1
MINIMUM		2		3	2			2				2	
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		2	2		2	2	2	2	2	2	2	2	2
AVERAGE		2	2		2	2	1	1	2	2	2		1
MINIMUM		2	2		2	2			2	2	2		
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2
MAXIMUM		2	3	1	2			3	2	1	2	2	2
AVERAGE		1	2	1	1			2	1		1	2	2
MINIMUM		1	1	1				2	1		1	2	2
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			5	6	4	5	6	7	3	6	6	9	7
MAXIMUM						3					40		
AVERAGE											7		
MINIMUM													
PASADENA CALIF	55 56												
NUMBER OF SAMPLES		2	2	1	3	3	2	3		2	2		
MAXIMUM		2	2	2	2	2	1	2		2	2		
AVERAGE		2	1	2				1		1	1		
MINIMUM		2		2						1	1		
SAN JOSE CALIF	55 56												
NUMBER OF SAMPLES		1	2	2		3	3	3	3	2	1	2	3
MAXIMUM			2			2		2	2	3	2	2	2
AVERAGE			2					1	2	3	2	1	
MINIMUM			2						2	3	2		
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		2		2	2	2	2		2		2	2	
AVERAGE		2		1	2	2	2					1	
MINIMUM		2			2	2	2						
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		11			2	2		2		9			
AVERAGE		5			1			1		3			
MINIMUM													
SUBURBAN													
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	2	2	2	1	1		2	1	2	1
MAXIMUM		2	1	1	2	2	3			2		2	2
AVERAGE		2	1		1	1	3			1		1	2
MINIMUM		2	1			1	3						2

TABLE 11. CADMIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) $\times 10^{-3}$												
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT									
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14		10	4	1	2	2	3	4	4	7	7	8
	1	56	22	2	10	4	1	2	2	3	3	4	5	8	10
	1	55 56	36		10	4	1	2	2	3	3	4	5	7	9
BOSTON MASS	1	55	23		3	1		1	1	1	1	1	2	2	2
EVERETT MASS	1	55	26		70	7		1	1	2	2	3	4	5	6
ELIZABETH N J	1	55 56	20	1	5	2	1	1	1	2	2	2	3	3	4
PAULSBORO N J	1	55 56	23		6	2		1	1	1	2	2	2	3	4
CAMDEN N J	1	55 56	19	2	7	3	1	2	2	2	2	3	3	4	5
PERTH AMBOY N J	1	55 56	21		12	3	1	1	1	2	2	3	3	4	7
TRENTON N J	1	55 56	16		6	2	1	1	1	1	2	2	3	4	4
JERSEY CITY N J	1	55 56	21		12	3	1	2	2	2	3	3	4	4	7
NEW YORK N Y	2	55 56	21		29	7	1	2	3	3	5	6	7	14	15
	3	54 55	18		43	5	1	2	2	2	3	3	4	4	5
		54 56	39		43	6	1	2	2	3	3	4	5	6	14
PHILADELPHIA PA	1	55	94		11	3	1	1	2	2	2	2	3	4	5
	1	56	11	2	7	4	2	2	2	3	4	4	5	5	6
	1	55 56	105		11	3	1	1	2	2	2	3	3	4	5
	4	56	11		140	17	1	2	2	3	3	6	9	10	19
	5	56	9	1	14	5	1	2	3	3	4	4	6	6	9
	6	56	11		6	2	1	1	1	1	2	2	2	2	5
	7	56	11	2	42	8	1	2	2	2	3	4	5	8	15
		55	94		11	3	1	1	2	2	2	2	3	4	5
		56	53		140	7	1	1	2	2	3	4	5	6	10
		55 56	147		140	4	1	1	2	2	2	3	4	5	7
ALTOONA PA	1	56	13		3	2		1	1	1	2	2	2	2	3
BRISTOL PA	1	55 56	18		8	2		1	1	1	1	2	3	3	4
CHESTER PA	1	55 56	16		7	2	1	1	1	2	2	2	3	3	4
ERIE PA	1	56	25		5	2	1	1	1	1	2	2	2	2	3
PITTSBURGH PA	1	56	21	2	10	4	1	2	2	3	4	5	5	6	7
WILLIAMSPORT PA	1	55 56	23		6	2	1	1	2	2	2	2	3	3	5
WASHINGTON DC	2	55 56	17		5	2	1	1	1	1	2	2	2	3	3
LOUISVILLE KY	1	54	17		38	7	1	1	2	3	3	4	6	7	8
	1	55	21		26	8	2	3	4	4	5	5	6	12	22
	1	54 55	38		38	7	1	2	3	4	5	5	6	8	22
	2	54	13		6	3	1	2	2	2	2	3	3	3	5
	2	55	10		16	3		1	1	1	2	3	4	5	7
	2	54 55	23		16	3		1	1	2	2	3	3	4	6
		54	31		38	5	1	1	2	2	3	3	5	6	7
		55	31		26	6	1	2	3	4	4	5	6	10	21
		54 55	62		38	6	1	1	2	3	3	4	5	7	17
BALTIMORE MD	1	57	18		34	3					1	1	1	1	1
CHARLESTON W VA	4	55	16		3	1	1	1	1	1	2	2	2	2	3
TAMPA FLA	1	55	21		6	2	1	1	1	1	2	2	2	2	3
ATLANTA GA	1	55 56	16		30	6	1	1	2	2	3	5	6	8	21
CHATTANOOGA TENN	3	55	14		4	1		1	1	1	2	2	2	2	3
	4	55 56	16		7	2	1	1	1	2	2	2	4	4	5
		55 56	32		7	2	1	1	1	1	2	2	2	3	5
CHICAGO ILL	1	55	28		199	12	2	2	3	3	4	5	8	9	10
	2	55	20	2	40	16	3	5	6	7	9	10	21	30	38
	4	55	29		100	9	1	2	2	3	4	6	7	8	10
		55	77		199	12	1	2	3	4	6	7	9	10	22
EAST ST LOUIS ILL	1	55 56	15	3	70	17	3	4	5	6	10	10	21	22	41
	2	55 56	14	2	20	5	1	2	2	2	3	3	5	6	10
		55 56	29	2	70	11	2	2	3	4	5	6	10	20	22

TABLE 11. CADMIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) × 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55 56	19		20	8	2	3	4	7	9	9	9	10	20
	2	55 56	26	1	20	7	1	2	3	4	5	7	8	10	20
	3	55 56	21		20	4	1	2	2	3	3	3	4	5	10
	4	55 56	20		30	6	1	1	2	2	3	4	5	7	22
		55 56	86		30	6	1	2	2	3	4	5	7	10	20
CINCINNATI OHIO	1	55	23	2	140	12	2	2	3	3	4	5	7	9	21
YOUNGSTOWN OHIO	1	57	12		70	16		1	1	3	14	15	21	28	36
MILWAUKEE WIS	1	57	19		43	4				1	1	1	1	1	22
MINNEAPOLIS MINN	1	54 55	21		4	1	1	1	1	1	2	2	2	2	3
KANSAS CITY MO	2	55 56	18	2	9	3	1	2	2	2	3	3	4	5	6
	4	55 56	9		2				1	1	1	1	1	1	2
		55 56	27		9	2	1	1	1	2	2	2	3	4	5
ST LOUIS MO	1	55 56	23	2	30	7	2	3	3	4	5	5	7	8	22
NEW ORLEANS LA	1	54 55	24		5	1				1	1	1	1	1	2
	2	54 55	22		10	1				1	1	1	1	2	2
		54 55	46		10	1				1	1	1	1	1	2
FT WORTH TEXAS	1	54 55	24		3	1		1	1	1	1	2	2	2	2
HOUSTON TEXAS	1	54 55	64		599	11			1	1	2	2	3	3	5
BELLAIRE TEXAS	1	54	17		5	2	1	1	1	2	2	2	2	4	4
	1	55	14		5	1		1	1	1	1	2	2	3	4
	1	54 55	31		5	2		1	1	1	2	2	2	3	4
DENVER COL	1	54 55	23		70	11		1	3	3	6	8	10	10	30
SALT LAKE CITY UTAH	2	54 55	26		20	3			1	1	1	3	4	5	5
ANCHORAGE ALASKA	1	54 55	13								1	1	1	1	1
SAN FRANCISCO CALIF	1	55 56	32		3					1	1	1	1	2	2
PASADENA CALIF	1	55 56	20		7	2	1	1	1	2	2	2	2	3	3
SAN JOSE CALIF	1	55 56	25		5	1		1	1	1	1	2	2	2	3
SAN LEANDRO CALIF	1	55 56	30	2	6	3	1	2	2	2	2	3	3	4	5
PORTLAND OREGON	1	54 55	20	1	20	6	1	2	3	4	4	5	7	8	10
SEATTLE WASH	1	57	20		10						1	1	1	1	1

TABLE 11. CADMIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		10	4	1	2	2	3	3	4	5	7	9
MASSACHUSETS TOTAL	55	49		70	4		1	1	1	2	2	2	3	5
NEW JERSEY TOTAL	55 56	120		12	2	1	1	1	2	2	2	3	4	5
NEW YORK TOTAL	54 56	39		43	6	1	2	2	3	3	4	5	6	14
PENNSYLVANIA TOTAL	55 56	265		140	3	1	1	1	2	2	2	3	4	6
DIS COLUMBIA TOTAL	55 56	17		5	2	1	1	1	1	2	2	2	3	3
KENTUCKY TOTAL	54 55	62		38	6	1	1	2	3	3	4	5	7	17
MARYLAND TOTAL	57	18		34	3					1	1	1	1	1
WEST VIRGINA TOTAL	55	16		3	1	1	1	1	1	2	2	2	2	3
FLORIDA TOTAL	55	21		6	2	1	1	1	1	2	2	2	2	3
GEORGIA TOTAL	55 56	16		30	6	1	1	2	2	3	5	6	8	21
TENNESSEE TOTAL	55 56	32		7	2	1	1	1	1	2	2	2	3	5
ILLINOIS TOTAL	55 56	106		199	12	1	2	3	4	5	7	9	10	22
INDIANA TOTAL	55 56	86		30	6	1	2	2	3	4	5	7	10	20
OHIO TOTAL	55 57	35		140	13	1	2	3	3	4	7	10	20	28
WISCONSIN TOTAL	57	19		43	4				1	1	1	1	1	22
MINNESOTA TOTAL	54 55	21		4	1	1	1	1	1	2	2	2	2	3
MISSOURI TOTAL	55 56	50		30	5	1	1	2	2	3	4	5	6	9
LOUISIANA TOTAL	54 55	46		10	1				1	1	1	1	1	2
TEXAS TOTAL	54 55	119		599	7		1	1	1	1	2	2	3	4
COLORADO TOTAL	54 55	23		70	11		1	3	3	6	8	10	10	30
UTAH TOTAL	54 55	26		20	3			1	1	1	3	4	5	5
ALASKA TOTAL	54 55	13								1	1	1	1	1
CALIFORNIA TOTAL	55 56	107		7	1		1	1	1	2	2	2	3	4
OREGON TOTAL	54 55	20	1	20	6	1	2	3	4	4	5	7	8	10
WASHINGTON TOTAL	57	20		10						1	1	1	1	1
NEW ENGLND TOTAL	55 56	85		70	4	1	1	1	2	2	3	4	5	8
MID ATLNTC TOTAL	54 56	424		140	3	1	1	2	2	2	3	3	4	6
MID EAST TOTAL	54 57	113		38	4		1	1	2	2	3	4	5	8
SOUTH EAST TOTAL	55 56	69		30	3	1	1	1	1	2	2	2	4	6
MID WEST TOTAL	55 57	246		199	9	1	2	2	3	4	6	9	10	21
GRT PLAINS TOTAL	54 56	71		30	4	1	1	1	2	2	3	4	5	8
GULF SOUTH TOTAL	54 55	165		599	5			1	1	1	2	2	2	4
ROCKY MNTN TOTAL	54 55	49		70	6		1	1	2	3	4	5	9	20
PAC COAST TOTAL	54 57	160		20	2			1	1	1	2	2	3	5
GRAND TOTAL	54 57	1382		599	5		1	1	2	2	3	3	5	9

TABLE 11. CADMIUM—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		3	1				1	1	1	1	2	2
LAKEHURST N J	1	55 56	17		3					1	1	1	1	2	2
KANAWHA CO W VA	1	55	17		3	1			1	1	1	1	1	2	2
DENVER COUNTY COLO	1	54 55	10		4	1			1	1	1	1	2	2	3
GRAND TOTAL		54 56	67		4	1			1	1	1	1	1	2	2
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		1										

TABLE 11. CADMIUM— URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		2	3	4	7	5	7	10	10	8	10	10	10
AVERAGE		1	3	3	3	3	3	7	5	8	5	7	9
MINIMUM			3	2	2	3	2	5	3	8	4	3	8
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		3	2	1		2	2	2	2	2	2	2	
AVERAGE		3	1			2	2	1	2	2	2	2	
MINIMUM		3				2	2		2	2	2	2	
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		5	70	5	2	4	40	4	2	3		20	3
AVERAGE		3	24	2	2	4	16	2	1	2		20	3
MINIMUM					2	4	2			2		20	3
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	2	5	1		1	2	1		1	2
MAXIMUM		5	2	3	4	2		1	5	3		3	4
AVERAGE		3	2	2	2	2		1	3	3		3	3
MINIMUM		1	2	2	1	2		1	1	3		3	3
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	2	4	2	1	4	1		2		1
MAXIMUM		6	3	4	4	2	2	2			3		3
AVERAGE		5	1	3	2	2	2	1			1		3
MINIMUM		5		2		2	2						3
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	2	1		1	1	2	3	2		2
MAXIMUM		6	4	3	2		2	5	7	3	2		5
AVERAGE		4	3	2	2		2	5	6	2	2		3
MINIMUM		3	2	2	2		2	5	5	2	2		2
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	3	4			1	2		2	3	2
MAXIMUM		3	2	12	6			2	3		4	9	4
AVERAGE		1	2	5	2			2	2		3	6	3
MINIMUM			2	2				2	2		3	2	2
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1		1	1	2	1		1	1	3
MAXIMUM		2	4	3		1	2	2			6	2	5
AVERAGE		1	3	3		1	2	1			6	2	4
MINIMUM			2	3		1	2	1			6	2	3
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	3	3		2	2	2	1		1	2
MAXIMUM		4	12	4	3		7	2	4	2		3	3
AVERAGE		3	7	3	2		5	1	3	2		3	2
MINIMUM		2	4	3	2		4		3	2		3	2
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		1	3	1	4	1	7	4	4	2	3	4	5
MAXIMUM		29	15	2	43	3	15	4	16	15	6	10	7
AVERAGE		29	8	2	13	3	5	2	6	9	5	4	3
MINIMUM		29	3	2	3	3	2	2		4	5	2	
PHILADELPHIA PA	55 56												
NUMBER OF SAMPLES		17	13	13	13	18	12	13	13	10	8	8	9
MAXIMUM		15	6	9	7	140	9	14	8	18	5	5	42
AVERAGE		5	2	3	3	10	4	3	3	4	2	2	8
MINIMUM					1		2	2	2	2		2	2
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			3		2	3			3	2	3	3	
AVERAGE			3		2	2			3	1	2	3	
MINIMUM			3		2	2			3		1	3	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			2	4	1			3		8	2	5	2
AVERAGE			2	4	1			2		3	2	4	1
MINIMUM			2	4	1			2			2	4	
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	?	3	4	1		1
MAXIMUM			2		3	2	7	2	4	6			4
AVERAGE			2		2	1	3	2	3	3			4
MINIMUM			2		2			2	3	2			4
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		2	2	2	2	2	2			4	3	5	2
AVERAGE		2	2	2	1	1	2			2	2	4	1
MINIMUM		2	2	2			2			2	2	3	1
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		5	4	10			6	2		7	8	6	4
AVERAGE		4	3	6			4	2		6	7	4	4
MINIMUM		2	2	3			3	2		5	6	2	4

TABLE 11. CADMIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			3	2	3	6	3	2	2	6	3	5	6
AVERAGE			2	2	2	3	1	2	2	3	2	3	4
MINIMUM			2	2	2	2		2	2	2	2	2	2
WASHINGTON DC	55 56												
NUMBER OF SAMPLES		1	2		1	3	2	1	3	2	1	1	
MAXIMUM			3		2	3	4	3	2	5	2		
AVERAGE			2		2	1	3	3	2	3	2		
MINIMUM			2		2		2	3	2	2	2		
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	1	1	3	13	13	12	6	1	6
MAXIMUM		3	6	26	6	5	20	23	10	25	7	4	38
AVERAGE		2	5	26	6	5	9	7	3	4	4	4	9
MINIMUM		2	4	26	6	5						4	2
CHARLESTON W VA	55												
NUMBER OF SAMPLES			1	1		2	2	2	1	1	3	2	1
MAXIMUM			2	3		2	3	2	2	3	3	2	3
AVERAGE			2	3		2	1	1	2	3	2	1	3
MINIMUM			2	3		2			2	3	2		3
TAMPA FLA	55												
NUMBER OF SAMPLES		2	1	1	3	2	1	2	2	3	1	2	1
MAXIMUM		2	2	2	2	2	2	2	6	6	3	2	2
AVERAGE		2	2	2	1	1	2	1	4	3	3	2	2
MINIMUM		2	2	2			2		2	2	3	2	2
ATLANTA GA	55 56												
NUMBER OF SAMPLES		1	1	3	2	1	1	3	1		1	1	1
MAXIMUM		20	8	30	20	1	3	3	4		6	7	2
AVERAGE		20	8	11	10	1	3	1	4		6	7	2
MINIMUM		20	8			1	3		4		6	7	2
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			3	4	2	6		2	2	3	5	4	7
AVERAGE			1	2	1	4		2	1	2	3	2	5
MINIMUM				2		2		2		2	2	2	3
CHICAGO ILL	55												
NUMBER OF SAMPLES		2	3	6	3	8	11	9	6	4	10	10	5
MAXIMUM		2	100	10	20	40	9	10	30	40	199	40	20
AVERAGE		2	39	5	10	8	5	3	9	23	27	13	10
MINIMUM		2	7	2			3		2	3		3	5
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		10	10	20	5	20	10	40	70	20	2	6	9
AVERAGE		5	6	11	5	11	6	40	31	10	2	4	5
MINIMUM		3	3	2	5	2	3	40	4	2	2	3	2
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		5	8	20	30	20	20	14	6	20	30	6	10
AVERAGE		3	5	10	10	9	5	4	2	7	13	3	5
MINIMUM			3		3	3			1	3	6	2	1
CINCINNATI OHIO	55												
NUMBER OF SAMPLES		2		2	2	2	2	2	3	2	2	2	2
MAXIMUM		4		10	6	5	8	3	7	9	140	10	20
AVERAGE		3		6	5	4	6	2	4	5	72	6	20
MINIMUM		3		3	4	3	4	2	2	2	4	3	20
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM					26	3		15	70		33		
AVERAGE					23	3		7	42		26		
MINIMUM					20	3			15		20		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM			43		29					20			
AVERAGE			21		9					10			
MINIMUM													
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	1	1	1		2		5	4	3	2	1
MAXIMUM		2		2	2		1		2	3	2	4	3
AVERAGE		2		2	2				2	1	2	3	3
MINIMUM		2		2	2				2		2	2	3
KANSAS CITY MO	55 56												
NUMBER OF SAMPLES		4	2	3	3	3	2	2	4	1	1	1	1
MAXIMUM		9	6	3	3	4	3	5	5	2	2	2	8
AVERAGE		4	4	2	1	1	2	3	3	2	2	2	8
MINIMUM		2	3	2			2	1	1	2	2	2	8
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		3	20		5	7	8	9	30	7	3	5	10
AVERAGE		2	12		4	5	6	5	21	7	3	5	7
MINIMUM		2	5		3	3	4	2	4	7	3	5	4

TABLE 11. CADMIUM—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	4	4	6	4	4	4	5	3
MAXIMUM			2	2	2	2	2	2	10	1	2	2	5
AVERAGE			1	1				1	2	1	1	1	3
MINIMUM										1			2
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2
MAXIMUM		2	2	2	2	1	1	3	2	2	2	3	2
AVERAGE		2	2	2	1		1	2	2	2	1	2	2
MINIMUM		2	2	2	1		1	2	2	2	1	2	2
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			5	6	4	5	6	7	3	6	6	9	7
MAXIMUM			3	8	4		3	5	4	7	599	2	12
AVERAGE			2	3	1			2	3	3	101	1	4
MINIMUM									3				
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	2	2	2	3	3	4	2	3
MAXIMUM		2		5	3	2	1	5	2	2	4	2	3
AVERAGE				4	2	2		5	2	2	3	1	2
MINIMUM				3	2	2		5	2	2	2		2
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	1	2
MAXIMUM		8	20	20	3	6	5		70	10	30	10	30
AVERAGE		5	12	15	1	4	2		39	5	16	10	20
MINIMUM		3	5	10		3			8		3	10	10
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	2	2	2	2	2	2	2	2	2	2	3
MAXIMUM		10	20	5	4		4					10	5
AVERAGE		5	11	2	4		2					7	3
MINIMUM			3		4							5	3
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		3	2			2	2	3	3		2	3	1
AVERAGE		2	1				1		1				1
MINIMUM		2											1
PASADENA CALIF	55 56												
NUMBER OF SAMPLES		2	2	1	3	3	2	3		2	2		
MAXIMUM		3	3	3	3	3	2	7		3	2		
AVERAGE		2	1	3	2	2	1	3		2	1		
MINIMUM		2		3	2	2		2		2	1		
SAN JOSE CALIF	55 56												
NUMBER OF SAMPLES		1	2	2		3	3	3	3	2	1	2	3
MAXIMUM		2	2			4	2	2	2	5	2	2	3
AVERAGE		2	1			3	1		2	4	2	1	1
MINIMUM		2				2			2	3	2		
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		3	2	3	2	2	5	4	6	2	6	6	2
AVERAGE		2	2	2	2	2	5	3	4	2	4	3	2
MINIMUM		2	2	2	2	2	5	2	3	2	3	2	2
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1		3	1			2	7	5	1		
MAXIMUM		20		5	1			4	8	20	10		
AVERAGE		20		2	1			3	5	7	10		
MINIMUM		20		1	1			3	2	4	10		
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		2	1	2			2	3	1	2	1	3	2
AVERAGE		1	1	1			1	1			1	1	1
MINIMUM			1	1							1		
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	2	2	2	1	1		2	1	2	1
MAXIMUM		1		1	2	1	2			2		2	3
AVERAGE					1		2			1		2	3
MINIMUM							2					2	3
KANAWHA CO W VA	55												
NUMBER OF SAMPLES		1	3	2		2	1	3	1		2	1	1
MAXIMUM			3	2		2	2		2		1		
AVERAGE			1	2		2	2		2				
MINIMUM				2		2	2		2				
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			2							3	2	4	
AVERAGE			2							2	2	4	
MINIMUM			2							1	2	4	

TABLE 12 CHROMIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14		20	5	1	2	2	5	6	6	7	7	9
	1	56	22		40	6		1	1	1	2	2	7	10	10
	1	55 56	36		40	6	1	1	1	2	3	6	7	9	10
BOSTON MASS	1	55	23		6						1	1	1	1	3
EVERETT MASS	1	55	26		10	1			1	1	1	2	2	3	4
ELIZABETH N J	1	55 56	20		4					1	1	1	1	1	2
PAULSBORO N J	1	55 56	23		4					1	1	1	1	1	2
CAMDEN N J	1	55 56	19		8					1	1	1	1	1	3
PERTH AMBOY N J	1	55 56	21		5						1	1	1	1	1
TRENTON N J	1	55 56	16		4				1	1	1	1	1	2	2
JERSEY CITY N J	1	55 56	21		70	12	1	2	3	4	6	11	13	14	23
NEW YORK N Y	2	55 56	21		30	4		1	1	2	2	4	5	7	10
	3	54 55	18		30	6	1	1	1	2	2	5	7	10	17
		54 56	39		30	5		1	1	2	2	4	5	9	13
PHILADELPHIA PA	1	55	94		12	2			1	1	1	1	2	3	6
	1	56	11		7	3		1	1	2	3	3	4	5	6
	1	55 56	105		12	2			1	1	1	1	2	3	6
	4	56	11		49	7		1	1	1	2	3	6	7	7
	5	56	9		7	1				1	1	1	1	1	5
	6	56	11		8	2			1	1	1	2	3	4	7
	7	56	11		31	4				1	1	1	3	7	7
		55	94		12	2			1	1	1	1	2	3	6
		56	53		49	3			1	1	1	2	3	6	7
		55 56	147		49	2			1	1	1	1	2	4	6
ALTOONA PA	1	56	13		6	1		1	1	1	1	1	2	2	4
BRISTOL PA	1	55 56	18		4						1	1	1	1	1
CHESTER PA	1	55 56	18		8	1			1	1	1	2	2	3	5
ERIE PA	1	56	25		5					1	1	1	1	1	2
PITTSBURGH PA	1	56	21		200	28	1	4	5	8	10	20	21	40	60
WILLIAMSPORT PA	1	55 56	23		9	4	1	1	2	2	3	5	6	6	7
WASHINGTON DC	2	55 56	17		10	4	1	1	2	2	3	3	6	8	8
LOUISVILLE KY	1	54	17		20	6	1	1	2	3	6	7	9	10	10
	1	55	20		150	13	1	2	2	3	3	3	5	10	21
	1	54 55	37		150	10	1	1	2	3	3	5	9	10	10
	2	54	13		10	2		1	1	2	2	3	3	3	5
	2	55	10		20	4		1	1	2	2	3	4	7	10
	2	54 55	23		20	3		1	1	2	2	3	3	5	10
		54	31		20	4		1	1	2	3	3	6	9	10
		55	30		150	10	1	1	2	2	3	3	5	10	20
		54 55	61		150	7		1	2	2	3	3	6	9	10
BALTIMORE MD	1	57	18	23	290	71	25	28	29	35	40	44	60	112	146
CHARLESTON W VA	4	55	16		40	8		1	1	1	4	9	9	10	20
TAMPA FLA	1	55	21		10	1				1	1	1	2	4	6
ATLANTA GA	1	55 56	16		20	5	1	1	2	2	3	5	6	9	10
CHATTANOOGA TENN	3	55	14		2				1	1	1	1	1	2	2
	4	55 56	18		30	5	1	1	1	2	2	3	4	8	10
		55 56	32		30	3		1	1	1	1	2	2	3	9
CHICAGO ILL	1	55	28		20	4		1	1	2	3	3	5	6	9
	2	55	20		40	6	1	1	2	3	4	6	7	8	10
	4	55	29		100	16		1	1	2	3	4	7	21	60
		55	77		100	9		1	1	2	3	4	6	9	21

TABLE 12 CHROMIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST ST LOUIS ILL	1	55 56	15	3	50	9	3	4	4	5	6	6	9	9	10
	2	55 56	14		20	4		1	1	2	4	5	6	6	7
		55 56	29		50	7	1	2	3	4	5	5	6	7	10
EAST CHICAGO IND	1	55 56	19		50	15	1	3	5	8	10	19	20	21	32
	2	55 56	26		50	11	2	2	4	5	7	9	10	20	21
	3	55 56	21		120	15	1	3	4	5	9	10	19	20	21
	4	55 56	20		70	12		1	2	4	5	5	10	20	32
		55 56	86		120	13	1	2	4	5	7	9	19	20	30
CINCINNATI OHIO	1	55	23		39	9	1	2	4	6	8	9	9	10	20
YOUNGSTOWN OHIO	1	57	12	29	75	47	29	33	36	40	44	51	52	60	74
MILWAUKEE WIS	1	57	19		88	29	1	17	19	23	26	28	36	40	44
MINNEAPOLIS MINN	1	54 55	21		7	2			1	1	1	2	2	4	6
KANSAS CITY MO	2	55 56	16		21	5	1	1	2	2	3	3	4	6	10
	4	55 56	9		3					1	1	1	1	1	2
		55 56	27		21	3		1	1	1	2	2	3	4	6
ST LOUIS MO	1	55 56	23		20	4	1	1	2	2	3	4	4	5	8
NEW ORLEANS LA	1	54 55	24		9	1				1	1	1	1	2	5
	2	54 55	22		6	1			1	1	1	1	2	2	3
		54 55	46		9	1				1	1	1	1	2	4
FT WORTH TEXAS	1	54 55	24		3						1	1	1	1	1
HOUSTON TEXAS	1	54	8	2	20	7	2	2	2	5	6	7	10	10	10
	1	55	56		30	4		1	2	2	2	3	4	6	9
	1	54 55	64		30	4		1	2	2	3	3	5	7	9
BELLAIRE TEXAS	1	54	17		30	7	1	1	2	2	2	3	9	10	10
	1	55	14		10					1	1	1	1	1	2
	1	54 55	31		30	4			1	1	1	2	2	9	10
DENVER COL	1	54 55	23		10	2		1	1	2	2	2	3	3	9
SALT LAKE CITY UTAH	2	54 55	26		100	21	3	6	9	9	10	10	20	21	32
ANCHORAGE ALASKA	1	54 55	13		20	4		1	1	1	2	3	4	7	10
SAN FRANCISCO CALIF	1	55 56	32		6	1			1	1	1	1	1	2	4
PASADENA CALIF	1	55 56	20		6	2		1	1	1	2	2	3	3	4
SAN JOSE CALIF	1	55 56	25		9	1			1	1	1	1	2	2	7
SAN LEANDRO CALIF	1	55 56	30		20	4	1	1	2	2	3	4	5	7	10
PORTLAND OREGON	1	54 55	20		20	8	1	2	4	5	6	8	10	10	20
SEATTLE WASH	1	57	20	17	59	33	19	22	25	28	30	32	40	49	52

TABLE 12 CHROMIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) $\times 10^{-3}$											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		40	6	1	1	1	2	3	6	7	9	10
MASSACHUSETS TOTAL	55	49		10	1				1	1	1	1	2	4
NEW JERSEY TOTAL	55 56	120		70	2				1	1	1	1	2	5
NEW YORK TOTAL	54 56	39		30	5		1	1	2	2	4	5	9	13
PENNSYLVANIA TOTAL	55 56	265		200	4			1	1	1	2	3	5	7
DIS COLUMBIA TOTAL	55 56	17		10	4	1	1	2	2	3	3	6	8	8
KENTUCKY TOTAL	54 55	61		150	7		1	2	2	3	3	6	9	10
MARYLAND TOTAL	57	18	23	290	71	25	28	29	35	40	44	60	112	146
WEST VIRGINA TOTAL	55	16		40	8		1	1	1	4	9	9	10	20
FLORIDA TOTAL	55	21		10	1				1	1	1	2	4	6
GEORGIA TOTAL	55 56	16		20	5	1	1	2	2	3	5	6	9	10
TENNESSEE TOTAL	55 56	32		30	3		1	1	1	1	2	2	3	9
ILLINOIS TOTAL	55 56	106		100	8	1	1	2	3	4	5	6	9	20
INDIANA TOTAL	55 56	86		120	13	1	2	4	5	7	9	19	20	30
OHIO TOTAL	55 57	35		75	22	2	4	8	9	10	20	35	40	54
WISCONSIN TOTAL	57	19		88	29	1	17	19	23	26	28	36	40	44
MINNESOTA TOTAL	54 55	21		7	2			1	1	1	2	2	4	6
MISSOURI TOTAL	55 56	50		21	3		1	1	2	2	3	4	5	8
LOUISIANA TOTAL	54 55	46		9	1				1	1	1	1	2	4
TEXAS TOTAL	54 55	119		30	3		1	1	1	2	2	3	5	9
COLORADO TOTAL	54 55	23		10	2		1	1	2	2	2	3	3	9
UTAH TOTAL	54 55	26		100	21	3	6	9	9	10	10	20	21	32
ALASKA TOTAL	54 55	13		20	4		1	1	1	2	3	4	7	10
CALIFORNIA TOTAL	55 56	107		20	2			1	1	1	2	3	4	6
OREGON TOTAL	54 55	20		20	8	1	2	4	5	6	8	10	10	20
WASHINGTON TOTAL	57	20	17	59	33	19	22	25	28	30	32	40	49	52
NEW ENGLND TOTAL	55 56	85		40	3			1	1	1	2	3	6	9
MID ATLNTC TOTAL	54 56	424		200	4			1	1	1	1	2	5	8
MID EAST TOTAL	54 57	112		290	17		1	2	3	4	7	9	21	38
SOUTH EAST TOTAL	55 56	69		30	3			1	1	1	2	3	5	9
MID WEST TOTAL	55 57	246		120	13	1	2	3	4	6	9	10	21	38
GRT PLAINS TOTAL	54 56	71		21	3		1	1	1	2	2	3	5	7
GULF SOUTH TOTAL	54 55	165		30	2			1	1	1	2	3	4	9
ROCKY MNTN TOTAL	54 55	49		100	12	1	2	2	3	6	9	10	10	21
PAC COAST TOTAL	54 57	160		59	7		1	1	1	2	3	5	9	22
GRAND TOTAL	54 57	1381		290	7		1	1	1	2	3	5	8	20

TABLE 12 CHROMIUM—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^3											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		5					1	1	1	1	1	2
LAKEHURST N J	1	55 56	17								1	1	1	1	1
KANAWHA CO W VA	1	55	17		10	1				1	1	1	1	2	3
DENVER COUNTY COLO	1	54 55	10		2					1	1	1	1	1	2
GRAND TOTAL		54 55	67												
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		2										2

TABLE 12 CHROMIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM			2	9	6	20	7	10	8	10	10	30	40
AVERAGE			1	3	1	8	4	9	4	10	6	13	23
MINIMUM				2		2		7	2	10		2	6
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		3					5			6	2		
AVERAGE		3					2			6	1		
MINIMUM		3								6			
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		2	10	3	2	7	4	3	1		2	2	2
AVERAGE		1	4	1	2	4	1	1			2	2	2
MINIMUM					2	2					2	2	2
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	2	5	1		1	2	1		1	2
MAXIMUM		2		2	2				2			4	
AVERAGE				1					1			4	
MINIMUM												4	
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	2	1		1	1	2	3	2		2
MAXIMUM		4	3						8				
AVERAGE		2	1						4				
MINIMUM									1				
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1		1	1	2	1		1	1	3
MAXIMUM			4	3							2	2	2
AVERAGE			2	3							2	2	1
MINIMUM				3							2	2	
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	3	3		2	2	2	1		1	2
MAXIMUM		5	47	23	4		8	2	70	4		3	14
AVERAGE		3	27	16	2		6	1	38	4		3	12
MINIMUM		2	13	11	2		4		6	4		3	11
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		1	3	1	4	1	7	4	4	2	3	4	5
MAXIMUM		10	5	5	16	5	4	30	7	4	13	30	19
AVERAGE		10	3	5	5	5	1	10	2	3	8	12	5
MINIMUM		10	2	5	2	5				2	2	5	
PHILADELPHIA PA	55 56												
NUMBER OF SAMPLES		17	13	13	13	18	12	13	13	10	8	8	9
MAXIMUM		31	7	3	12	49	9	9	8	7		3	10
AVERAGE		4	1		1	4	3	1	3	2		1	4
MINIMUM													
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			2	2	2	4			8	2	2		
AVERAGE			2	2	1	1			6	1	1		
MINIMUM			2	2					6	1			
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM					8		3	5	3	7			
AVERAGE					4		1	2	2	2			
MINIMUM													
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		2	1	1	2	1				2	1	5	5
AVERAGE			1							1		3	1
MINIMUM			1									1	
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		20	10	80			20			60	30	200	10
AVERAGE		11	6	50			12			50	25	102	10
MINIMUM		5	3	20			7			40	20	4	10
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			9	7	8	7		3	2	7		7	5
AVERAGE			6	7	6	5		3	2	5		3	3
MINIMUM			3	7	5	2		3	2	2		2	2
WASHINGTON DC	55 56												
NUMBER OF SAMPLES		1	2		1	3	2	1	3	2	1	1	
MAXIMUM		8	8		2	9	10	2	3	4	6	2	
AVERAGE		8	5		2	3	8	2	2	3	6	2	
MINIMUM		8	3		2		6	2		2	6	2	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		1	3	1	1	1	3	13	13	12	6	1	6
MAXIMUM		2	3	10	3	5	20	30	150	10	7		20
AVERAGE		2	3	10	3	5	10	5	18	2	2		6
MINIMUM		2	3	10	3	5							

TABLE 12 CHROMIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^3

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		29	33	110	290	150	49	56	140	42			
AVERAGE		29	28	77	148	150	37	45	68	42			
MINIMUM		29	23	44	25	150	28	35	26	42			
CHARLESTON W VA	55												
NUMBER OF SAMPLES			1	1		2	2	2	1	1	3	2	1
MAXIMUM			9			10	20	3	10	10	20		40
AVERAGE			9			8	10	1	10	10	8		40
MINIMUM			9			7			10	10	1		40
TAMPA FLA	55												
NUMBER OF SAMPLES		2	1	1	3	2	1	2	2	3	1	2	1
MAXIMUM			5		1				10	7	2		
AVERAGE			5						7	5	2		
MINIMUM			5						4	3	2		
ATLANTA GA	55 56												
NUMBER OF SAMPLES		1	1	3	2	1	1	3	1		1	1	1
MAXIMUM		10	6	10	5	2	2	20	3		10	7	5
AVERAGE		10	6	4	2	2	2	6	3		10	7	5
MINIMUM		10	6	2		2	2		3		10	7	5
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			3	2	2	10		2	3	20	9	2	30
AVERAGE			1	1	1	6		2	1	6	4		15
MINIMUM						2		2					
CHICAGO ILL	55												
NUMBER OF SAMPLES		2	3	6	3	8	11	9	6	4	10	10	5
MAXIMUM			100	9	10	60	70	8	8	80	40	20	9
AVERAGE			36	4	6	14	16	1	2	25	7	4	5
MINIMUM			3				2			4			
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		9	6	50	10	20	6	10	10	6	2	7	7
AVERAGE		5	3	27	7	11	3	10	5	4	2	6	5
MINIMUM				4	5	2	2	10	4		2	5	4
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		10	10	120	70	30	20	10	20	30	50	50	40
AVERAGE		6	4	23	21	20	9	5	8	11	22	9	11
MINIMUM		3			4	10			1	2	6		
CINCINNATI OHIO	55												
NUMBER OF SAMPLES		2		2	2	2	2	2	3	2	2	2	2
MAXIMUM		10		20	9	9	9	10	20	8	39	9	20
AVERAGE		5		11	7	5	6	8	11	4	21	4	14
MINIMUM				2	6	2	3	7	5		4		8
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				39	68	54	29	42	52	35	75		
AVERAGE				39	51	54	29	38	52	35	67		
MINIMUM				39	34	54	29	34	52	35	60		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		41	88	35	70	41		25	21	37	22		
AVERAGE		40	44	17	38	34		22	19	30	22		
MINIMUM		39			17	27		19	18	24	22		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	1	1	1		2		5	4	3	2	1
MAXIMUM		6	2	7	2		2		4	2	5	6	2
AVERAGE		6	2	7	2		1		1	1	1	3	2
MINIMUM		6	2	7	2								2
KANSAS CITY MO	55 56												
NUMBER OF SAMPLES		4	2	3	3	3	2	2	4	1	1	1	1
MAXIMUM		4	21	20	2	2	6	1	6	3	2		10
AVERAGE		2	12	8			4		3	3	2		10
MINIMUM			3	2			3			3	2		10
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		4	5		4	2	3	8	10	5	3	3	20
AVERAGE		3	5		2	1	2	4	5	5	3	1	14
MINIMUM		2	5				2		2	5	3		8
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	4	4	6	4	4	4	5	3
MAXIMUM			2				3	7	2	9	5	2	2
AVERAGE								1	1	4	3	1	
MINIMUM											1		
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			5	6	4	5	6	7	3	6	6	9	7
MAXIMUM			10	10	3	8	10	10	10	30	9	5	20
AVERAGE			3	4	2	4	5	4	5	10	2	2	5
MINIMUM						2			3	2			2

TABLE 12 CHROMIUM—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	2	2	2	3	3	4	2	3
MAXIMUM		10	2	1				10	30	9	4	2	3
AVERAGE		3	1					10	23	4	2	1	2
MINIMUM								10	9	2	2		2
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	1	2
MAXIMUM		10	10	3	3	3	3	10	3		3	3	
AVERAGE		5	6	3	1	3	1	6	1		3	3	
MINIMUM			2	3		3		3			3	3	
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	2	2	2	2	2	2	2	2	2	2	3
MAXIMUM		100	90	20	7	20	20	10	20	10	10	100	10
AVERAGE		46	60	11	5	11	10	8	15	10	8	60	10
MINIMUM		10	30	3	4	3		7	10	10	6	20	10
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES			1	2	2		4		1		1	1	1
MAXIMUM					7		20		10				
AVERAGE					4		8		10				
MINIMUM					2		3		10				
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		2	3	2	5	5	6	4	2	3		2	
AVERAGE		1	1	1	5	2	3	1	1	1			
MINIMUM					5	1		1					
PASADENA CALIF	55 56												
NUMBER OF SAMPLES		2	2	1	3	3	2	3		2	2		
MAXIMUM		5	4	2	6	3		3		4	3		
AVERAGE		4	2	2	3	1		2		3	2		
MINIMUM		3		2	2			1		3	1		
SAN JOSE CALIF	55 56												
NUMBER OF SAMPLES		1	2	2		3	3	3	3	2	1	2	3
MAXIMUM		1				2	2	2	7	9	2		2
AVERAGE		1				1		1	4	8	2		
MINIMUM		1							3	8	2		
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		2	2	3	2	5	20	8	20	5	10	8	
AVERAGE		2	2	2	2	5	15	4	8	5	6	3	
MINIMUM		2	2	2	2	5	10		4	5	2	1	
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1		3	1			2	7	5	1		
MAXIMUM		10		8				10	20	10	20		
AVERAGE		10		3				7	12	4	20		
MINIMUM		10						5	4	1	20		
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		52	52	51	30	45	30	27	22	59	26		
AVERAGE		48	41	51	29	35	26	24	19	39	26		
MINIMUM		45	30	51	29	26	22	22	17	19	26		
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM			1	5			2			2	2	2	2
AVERAGE			1	3							2	1	
MINIMUM			1	1							2		
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	2	2	2	1	1		2	1	2	1
MAXIMUM													
AVERAGE													
MINIMUM													
KANAWHA CO W VA	55												
NUMBER OF SAMPLES		1	3	2		2	1	3	1		2	1	1
MAXIMUM			8	2		10			2		3		
AVERAGE			2	1		6			2		1		
MINIMUM				1		2			2				
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			1							1	2	2	2
AVERAGE			1								1	2	2
MINIMUM			1									2	2

TABLE 13. COPPER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	1	20	10	1	5	6	8	9	9	10	11	21
	1	56	22		70	13	5	6	7	9	10	10	11	20	22
	1	55 56	36		70	12	5	6	7	8	9	10	11	19	21
BOSTON MASS	1	55	23	34	450	123	37	52	59	81	104	117	146	164	243
EVERETT MASS	1	55	26	10	550	124	29	44	49	52	70	83	93	160	342
ELIZABETH N J	1	55 56	21		510	67	5	10	16	29	39	44	55	62	104
PAULSBORO N J	1	55 56	25	7	168	57	20	24	35	41	52	62	78	85	104
CAMDEN N J	1	55 56	21	13	1500	118	18	22	29	39	44	49	57	74	104
PERTH AMBOY N J	1	55 56	23	17	120	61	24	29	31	44	60	66	74	96	114
TRENTON N J	1	55 56	17	18	550	73	26	28	31	34	37	41	52	68	74
JERSEY CITY N J	1	55 56	23	14	1200	115	20	28	31	41	52	62	68	74	173
NEW YORK N Y	2	54 56	50		102	21	1	6	7	10	13	19	22	33	44
	3	54 55	24		76	17	2	9	10	11	13	16	20	21	31
		54 56	74		102	20	2	7	9	10	13	18	21	29	42
PHILADELPHIA PA	1	54	6	49	242	139	52	52	88	88	123	173	173	205	205
	1	55	94		16	4		1	2	3	4	5	5	6	8
	1	56	11		14	4	1	1	2	2	3	5	5	6	9
	1	54 56	111		242	11	1	1	2	3	4	5	5	6	9
	3	54	4	40	321	125		44	44	68	68	68	74	74	342
	4	56	11		58	17		1	1	2	6	16	31	34	37
	5	56	9		28	4		1	1	1	1	1	2	2	2
	6	56	11		5	2		1	1	2	2	3	3	4	4
	7	56	11		70	11	1	1	2	4	5	6	8	9	16
		54	10	40	321	133	44	52	68	74	88	123	173	205	243
		55	94		16	4		1	2	3	4	5	5	6	8
		56	53		70	8		1	1	2	3	4	5	8	29
		54 56	157		321	13		1	2	3	4	5	6	7	16
ALTOONA PA	1	56	13	90	2300	763	104	266	288	482	572	626	679	1047	2254
BRISTOL PA	1	55 56	18	11	58	25	11	14	14	15	17	19	22	48	55
CHESTER PA	1	55 56	18		21	5	1	2	3	3	4	4	5	5	7
ERIE PA	1	56	25	30	930	193	44	57	79	88	104	146	230	288	527
PITTSBURGH PA	1	56	21	8	2400	386	10	31	41	44	96	160	288	957	1136
WILLIAMSPORT PA	1	55 56	23	10	120	30	11	19	20	21	27	28	29	30	44
WASHINGTON DC	1	54	23		6						1	1	1	1	2
	2	55 56	20		12	3	1	1	1	2	2	2	3	4	6
		54 56	43		12	1			1	1	1	1	2	3	5
LOUISVILLE KY	1	54	20	2	58	14	2	4	5	6	8	11	17	23	26
	1	55	21		36	11	4	4	5	5	8	11	13	18	26
	1	54 55	41		58	12	3	4	5	5	8	11	16	22	26
	2	54	13		5	1			1	1	1	1	1	2	4
	2	55	10	2	79	11	1	1	2	2	2	2	4	3	16
	2	54 55	23		79	5		1	1	1	1	2	2	4	8
	3	54	5	1	18	5	1	1	2	2	2	2	5	5	18
		54	38		58	8		1	1	2	4	5	8	13	23
		55	31		79	11	1	2	4	4	5	8	12	16	26
		54 55	69		79	9	1	1	2	4	5	5	10	16	24
BALTIMORE MD	1	57	18	4	13	6	4	5	5	6	6	7	7	7	8
CHARLESTON W VA	1	54	6		27	10	1	1	4	4	5	6	6	22	22
	4	55	16	5	20	8	5	5	5	6	7	9	9	10	11
		54 55	22		27	8	4	4	5	6	6	7	9	11	20
TAMPA FLA	1	54 55	28		39	6	1	2	2	3	3	4	4	4	6
ATLANTA GA	1	54 56	22		30	6		1	4	4	4	5	5	7	11
CHATTANOOGA TENN	3	55	14		15	2			1	1	1	1	2	3	8
	4	55 56	18	1	20	5	1	2	2	4	4	5	6	7	9
		55 56	32		20	4		1	1	2	3	4	5	7	9

TABLE 13. COPPER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
CHICAGO ILL	1	54	4		14	4		1	1	2	2	2	3	3	16
	1	55	28		40	9	4	5	6	6	7	9	10	10	11
	1	54 55	32		40	8	2	4	6	6	7	8	9	10	16
	2	54	30		49	8		1	1	1	4	8	12	15	17
	2	55	26		22	9	5	6	7	7	9	10	10	11	16
	2	54 55	56		49	8		1	4	6	8	10	11	14	17
	3	54	3		18	8		1	1	1	6	6	6	6	18
	4	55	29		70	11	1	1	4	5	8	10	10	19	22
		54	37		49	7		1	1	1	4	8	12	15	17
		55	83		70	10	1	5	6	6	8	9	10	11	20
		54 55	120		70	9	1	1	5	6	7	9	10	13	19
EAST ST LOUIS ILL	1	55 56	15		300	36	4	4	6	6	8	8	10	11	173
	2	55 56	14		7	2			1	1	1	2	3	4	5
		55 56	29		300	20		1	2	3	4	5	6	8	11
EAST CHICAGO IND	1	55 56	19	1	50	11	1	5	6	8	9	10	11	19	21
	2	55 56	26		110	22	2	5	10	11	18	20	21	29	44
	3	55 56	21	1	170	26	1	5	7	8	10	15	26	31	62
	4	55 56	20		12	5	1	1	2	3	6	7	8	9	10
		55 56	86		170	17	1	4	6	7	9	10	16	21	31
DETROIT MICH	1	53 54	32		396	66	6	15	26	37	41	45	49	62	123
CINCINNATI OHIO	1	54	72		467	12			1	1	1	2	4	9	25
	1	55	27		200	13	1	3	4	5	5	6	7	9	11
	1	54 55	99		467	12			1	1	3	4	6	9	24
	2	54	13		27	7		1	2	2	4	4	7	17	18
	4	54	20		243	45		1	1	6	10	11	13	52	173
	5	54	19		69	8			1	1	2	2	5	7	18
		54	124		467	16			1	1	2	4	7	13	29
		55	27		200	13	1	3	4	5	5	6	7	9	11
		54 55	151		467	16			1	1	3	5	7	11	27
YOUNGSTOWN OHIO	1	57	12	6	15	10	6	7	9	10	10	11	11	13	15
MILWAUKEE WIS	1	57	19	4	80	19	4	5	6	8	11	13	18	31	44
MINNEAPOLIS MINN	1	54 55	31		46	7	1	2	3	4	5	6	8	10	17
KANSAS CITY MO	2	54 56	22		10	4	1	2	3	3	4	4	5	6	8
	3	54	4		28	12		1	1	1	1	1	22	22	31
	4	55 56	9		5	2			1	1	1	1	2	2	5
		54 56	35		28	4		1	2	3	3	4	5	5	9
ST LOUIS MO	1	55 56	23	4	50	12	5	6	7	8	10	10	11	11	22
NEW ORLEANS LA	1	54 55	26		20	2					1	1	1	1	7
	2	54 55	24		5	1		1	1	1	1	2	2	3	4
		54 55	50		20	2				1	1	1	2	3	4
FT WORTH TEXAS	1	54 55	32		114	35	10	17	19	20	21	26	30	62	88
LAKEWORTH TEXAS	1	54	5		32	10	1	1	1	1	3	3	16	16	37
HOUSTON TEXAS	1	54	21		29	6			1	1	1	2	5	16	24
	1	55	56		33	8	1	2	3	4	6	7	9	13	22
	1	54 55	77		33	8		1	2	3	4	6	8	15	23
BELLAIRE TEXAS	1	54	19		8	2		1	1	1	1	2	2	3	4
	1	55	14		6	1				1	1	1	1	1	4
	1	54 55	33		8	1			1	1	1	1	2	2	4
DENVER COL	1	54 55	23		40	10	2	4	5	5	9	10	11	19	21
SALT LAKE CITY UTAH	2	54 55	31		30	7	1	2	3	4	6	7	8	10	19
ANCHORAGE ALASKA	1	54 55	34		53	3				1	1	1	1	1	3
LOS ANGELES CALIF		54	18		40	10		1	1	3	4	15	17	17	20
SAN FRANCISCO CALIF	1	55 56	32		10	1				1	1	1	1	2	4

TABLE 13. COPPER—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻²											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
PASADENA CALIF	1	54	23	2	48	15	5	6	9	10	11	12	15	18	37
	1	55	21		12	5		1	1	4	5	6	7	7	11
	1	56	4	2	20	13		2	2	11	11	11	20	20	22
	1	54 56	48		12	10	1	4	5	6	8	10	12	15	29
BERKELEY CALIF	1	54 55	34		30	3				1	1	1	2	6	11
SAN JOSE CALIF	1	54	27		61	11	1	1	2	3	4	4	9	26	29
	1	55	12		6	1			1	1	1	2	2	3	4
	1	56	20		9	1			1	1	1	2	2	3	4
	1	54 56	59		61	6		1	1	1	2	3	3	6	24
SAN LEANDRO CALIF	1	55 56	30		10	3	1	1	2	3	3	4	4	4	5
PORTLAND OREGON	1	54	18		40	5		1	1	1	2	3	4	4	11
	1	55	19		6	3	1	1	2	3	3	3	4	4	5
	1	54 55	37		40	4		1	1	2	3	3	4	5	6
	2	54	15		27	5		1	1	1	2	3	6	8	16
	5	54	10		10	2			1	1	1	1	3	4	7
	4	54	10		8	2		1	1	2	2	3	3	4	4
		54	53		40	4			1	1	2	3	3	6	11
		55	19		6	3	1	1	2	3	3	3	4	4	5
		54 55	72		40	4		1	1	1	2	3	4	5	8
SEATTLE WASH	1	57	20		42	8	3	4	5	6	6	7	8	9	13

TABLE 13. COPPER—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		70	12	5	6	7	8	9	10	11	19	21
MASSACHUSETS TOTAL	55	49	10	550	123	34	45	52	66	82	94	117	162	315
NEW JERSEY TOTAL	55 56	130		1500	82	18	26	30	38	44	55	65	83	119
NEW YORK TOTAL	54 56	74		102	20	2	7	9	10	13	18	21	29	42
PENNSYLVANIA TOTAL	54 56	275		2400	95	1	2	4	5	7	14	29	60	224
DIS COLUMBIA TOTAL	54 56	43		12	1			1	1	1	1	2	3	5
KENTUCKY TOTAL	54 55	69		79	9	1	1	2	4	5	5	10	16	24
MARYLAND TOTAL	57	18	4	13	6	4	5	5	6	6	7	7	7	8
WEST VIRGINA TOTAL	54 55	22		27	8	4	4	5	6	6	7	9	11	20
FLORIDA TOTAL	54 55	28		39	6	1	2	2	3	3	4	4	4	6
GEORGIA TOTAL	54 56	22		30	6		1	4	4	4	5	5	7	11
TENNESSEE TOTAL	55 56	32		20	4		1	1	2	3	4	5	7	9
ILLINOIS TOTAL	54 56	149		300	11		1	4	5	6	9	10	12	19
INDIANA TOTAL	55 56	86		170	17	1	4	6	7	9	10	16	21	31
MICHIGAN TOTAL	53 54	32		396	66	6	15	26	37	41	45	49	62	123
OHIO TOTAL	54 57	163		467	15		1	1	2	4	6	8	11	26
WISCONSIN TOTAL	57	19	4	80	19	4	5	6	8	11	13	18	31	44
MINNESOTA TOTAL	54 55	31		46	7	1	2	3	4	5	6	8	10	17
MISSOURI TOTAL	54 56	58		50	7	1	2	3	4	5	6	9	10	19
LOUISIANA TOTAL	54 55	50		20	2				1	1	1	2	3	4
TEXAS TOTAL	54 55	147		114	12		1	1	3	5	7	14	21	29
COLORADO TOTAL	54 55	26		40	9	1	2	4	5	6	9	10	19	20
UTAH TOTAL	54 55	31		30	7	1	2	3	4	6	7	8	10	19
ALASKA TOTAL	54 55	34		53	3				1	1	1	1	1	3
CALIFORNIA TOTAL	54 56	222		61	5		1	1	1	2	4	5	9	17
OREGON TOTAL	54 55	72		40	4		1	1	1	2	3	4	5	8
WASHINGTON TOTAL	57	20		42	8	3	4	5	6	6	7	8	9	13
NEW ENGLND TOTAL	55 56	85		550	76	6	9	11	21	42	55	80	104	173
MID ATLNTC TOTAL	54 56	479		2400	80	1	4	6	10	19	29	42	65	123
MID EAST TOTAL	54 57	152		79	7		1	2	3	4	5	6	10	17
SOUTH EAST TOTAL	54 56	82		39	5		1	2	3	3	4	5	6	10
MID WEST TOTAL	53 57	449		467	18		1	3	5	7	9	11	19	38
GRT PLAINS TOTAL	54 56	89		50	7	1	2	3	4	5	6	8	10	18
GULF SOUTH TOTAL	54 55	197		114	9		1	1	1	3	4	8	18	25
ROCKY MNTN TOTAL	54 55	57		40	8	1	2	3	5	6	8	9	11	20
PAC COAST TOTAL	54 57	348		61	5			1	1	2	3	5	7	15
GRAND TOTAL	53 57	1938		2400	31		1	2	4	6	9	13	25	52

TABLE 13. COPPER—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^3											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23	10	3000	430	22	30	41	52	88	123	160	243	1348
LAKEHURST N J	1	55 56	19		300	60	3	18	26	44	52	57	68	79	88
KANAWHA CO W VA	1	54 55	23		20	2		1	1	1	2	2	3	3	6
HILLSBOROUGH CO FLA	1	54	4	2	87	40		2	2	13	13	13	62	62	88
FULTON CO GEORGIA	1	54	4		6	2				1	1	1	1	1	6
HAMILTON COUNTY OHIO	1	54 55	31		194	34	1	1	15	17	23	26	37	44	88
TONKA BAY MINN	1	54	8		34	4					1	1	1	1	1
DENVER COUNTY COLO	1	54 55	10	2	20	6	1	2	2	3	3	3	4	4	20
SALT LAKE CO UTAH	1	54	5		59	19	1	1	2	2	11	11	26	26	62
MULTNOMAH CNTY ORE	1	54	12		1						1	1	1	1	1
GRAND TOTAL		54 56	139		3000	87		1	1	3	11	21	31	56	104
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		2										

TABLE 13. COPPER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		10	10	10	70	20	9	20	10	10	20	30	20
AVERAGE		5	7	8	22	11	7	13	6	10	11	19	20
MINIMUM			5	6	5	7	6	10	1	10	7	8	20
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		53	34	60	240	180	150	450	300	110	90	130	120
AVERAGE		53	34	47	240	180	125	305	157	110	85	105	120
MINIMUM		53	34	40	240	180	100	160	60	110	80	80	120
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		50	80	50	550	380	160	90	310	100	50	150	510
AVERAGE		26	53	40	550	235	93	80	185	85	50	150	295
MINIMUM		10	30	30	550	90	50	70	60	70	50	150	80
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		40	30	216	90	510		40	9	5		30	35
AVERAGE		21	20	105	68	510		40	4	5		30	32
MINIMUM		10	10	40	46	510		40		5		30	30
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		19	140	82	168	70	38	77	55		97		75
AVERAGE		17	59	48	87	56	38	47	55		64		75
MINIMUM		16	7	25	45	43	38	21	55		32		75
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		40	1500	93	89		67	30	47	55	60		27
AVERAGE		30	557	60	68		67	30	45	40	39		24
MINIMUM		21	13	42	47		67	30	43	29	18		22
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		27	88	120	120			31	60		94	72	63
AVERAGE		22	88	88	80			31	45		78	45	45
MINIMUM		17	88	33	53			31	31		62	24	28
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		32	54	38	115	70	31	49	28		550	40	68
AVERAGE		26	45	38	115	70	31	43	28		550	40	42
MINIMUM		18	36	38	115	70	31	37	28		550	40	24
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		55	1200	220	74		130	38	160	32		19	30
AVERAGE		46	481	91	50		100	26	95	32		19	26
MINIMUM		38	73	29	25		70	14	30	32		19	22
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		4	5	4	8	5	10	7	5	6	6	7	7
MAXIMUM		39	23	31	94	76	39	20	20	35	69	30	102
AVERAGE		26	15	22	40	20	14	9	11	15	24	13	24
MINIMUM		16	4	10	6		7		1	7	1		7
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		20	16	14	15	19	12	13	13	10	8	8	9
MAXIMUM		242	321	173	67	110	58	31	34	37	2	5	70
AVERAGE		21	39	17	11	10	11	5	7	7		1	8
MINIMUM				2		2	3						
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			1100	630	1900	640			510	250	560	2300	
AVERAGE			1100	630	1450	463			510	225	325	2300	
MINIMUM			1100	630	1000	280			510	200	90	2300	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			15	18	16	21		21	11	45	58	54	20
AVERAGE			15	18	16	17		16	11	22	56	50	18
MINIMUM			15	18	16	13		11	11	15	54	46	17
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			5		7	5	3	6	5	7	21		3
AVERAGE			5		5	3	1	5	4	5	21		3
MINIMUM			5		3	1		4	3	3	21		3
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		930	90	60	210	70	40	90		510	290	410	210
AVERAGE		516	90	55	120	55	40	90		266	220	245	106
MINIMUM		120	90	50	60	40	40	90		80	140	80	30
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		2400	1000	560			10	40		90	90	40	50
AVERAGE		1520	690	323			9	35		80	65	40	50
MINIMUM		960	150	160			8	30		70	40	40	50
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			50	20	40	40	20	120	20	30	30	30	30
AVERAGE			33	20	30	30	15	120	20	26	20	26	25
MINIMUM			20	20	20	20	10	120	20	20	10	20	20

TABLE 13. COPPER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-2}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	5		4	6	6	4	7	6	3	1	
MAXIMUM		3	12		6	4	6	2	2	2	2	2	
AVERAGE		3	6		2	2	2					2	
MINIMUM		3										2	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	4	4	4	13	13	12	6	1	6
MAXIMUM		2	5	28	58	36	18	79	23	25	12	20	23
AVERAGE		1	4	28	17	17	12	13	6	7	6	20	7
MINIMUM			2	28	1	2	2				2	20	
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		6	7	7	13	4	8	7	8	7			
AVERAGE		6	6	6	9	4	6	7	6	7			
MINIMUM		6	6	6	5	4	4	7	5	7			
CHARLESTON W VA	54 55												
NUMBER OF SAMPLES			1	1	3	4	3	2	1	1	3	2	1
MAXIMUM			10	10	27	9	6	7	10	10	10	5	20
AVERAGE			10	10	17	6	3	6	10	10	7	5	20
MINIMUM			10	10	4	5		5	10	10	6	5	20
TAMPA FLA	54 55												
NUMBER OF SAMPLES		2	2	1	5	5	2	2	2	3	1	2	1
MAXIMUM		5	39	3	29	23	3	5	6	5	4	4	3
AVERAGE		4	21	3	7	6	1	4	4	3	4	4	3
MINIMUM		4	3	3		1		3	3	1	4	4	3
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	3	4	3	3	1	3	1		1	1	1
MAXIMUM		7	5	8	4	5	5	6	5		30	30	10
AVERAGE		7	5	6	1	1	5	3	5		30	30	10
MINIMUM		7	5	4			5	1	5		30	30	10
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM		6	9	5	1	10		1	5	2	7	20	15
AVERAGE		6	5	3		5		1	2	1	4	10	9
MINIMUM		6	1	2		1		1			2	3	3
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	12	20	14	9	8	16	13	8
MAXIMUM		6	22	20	10	70	49	20	20	30	30	40	15
AVERAGE		3	10	9	7	15	9	4	6	8	9	12	9
MINIMUM				1	6	2						4	6
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		10	1	150	300	3	8	20	10	7	4	1	10
AVERAGE		5		77	151	3	5	20	7	3	4	1	5
MINIMUM				5	3	3	1	20	4		4	1	1
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		80	50	30	28	20	38	54	26	90	26	110	170
AVERAGE		23	23	13	13	9	12	8	7	22	14	26	31
MINIMUM		1	2	2	6	4				2	7		1
DETROIT MICH	53 54												
NUMBER OF SAMPLES			1	3	3	2	1					22	
MAXIMUM			1	396	43	109	52					92	
AVERAGE			1	350	34	90	52					34	
MINIMUM			1	300	29	71	52						
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	8	40	17	18	19	8	9	12	8	3	6
MAXIMUM		13	69	467	52	243	17	5	6	6	24	200	11
AVERAGE		7	19	25	10	35	2	1	1	1	5	70	5
MINIMUM		4										3	1
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				7	11	11	10	15	14	6	12		
AVERAGE				7	9	11	10	13	13	6	11		
MINIMUM				7	8	11	10	11	13	6	10		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		42	44	55	28	80	13	8	6	7	4		
AVERAGE		32	25	34	18	44	13	7	5	6	4		
MINIMUM		22	6	14	10	8	13	6	4	5	4		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	3	2	3	4	3		5	4	3	2	1
MAXIMUM		2	18	6	4	46	17		20	10	10	5	7
AVERAGE		2	11	5	1	12	10		8	6	7	4	7
MINIMUM		2	3	5			3		4	2	6	3	7
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	3	4	6	5	3	2	4	1	1	1	1
MAXIMUM		5	28	9	20	4	4	8	6	1	4	6	10
AVERAGE		3	12	5	5	1	2	4	3	1	4	6	10
MINIMUM		2	4	3				1	1	1	4	6	10

TABLE 13. COPPER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		50	10		40	20	10	10	10	8	7	5	6
AVERAGE		35	8		25	16	9	10	9	8	7	4	6
MINIMUM		20	7		10	10	8	10	9	8	7	4	6
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	6	6	6	4	4	4	5	3
MAXIMUM		18	2	3	3	3	2	5	2	7	20	3	2
AVERAGE		9	1	1				2		3	8		
MINIMUM								1					
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	3	4	4	5	2	2	2	2	2	2	2
MAXIMUM		70	70	113	114	79	50	40	30	20	20	30	60
AVERAGE		45	35	61	42	25	40	25	25	20	20	25	45
MINIMUM		20	17	8	10		30	10	20	20	20	20	30
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			6	6	5	8	14	7	3	6	6	9	7
MAXIMUM			26	10	7	8	24	18	29	33	22	31	19
AVERAGE			7	6	4	2	3	7	21	22	16	7	4
MINIMUM				2	1				6	12	8		
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	3	3	2	3	3	4	2	3
MAXIMUM		4	2	6		1			2		8	7	3
AVERAGE		1	1	2					1		4	5	2
MINIMUM				1							2	4	2
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		20	20	20	40	10	3	5	5	7	9	10	20
AVERAGE		15	15	15	30	6		5	4	6	5	10	12
MINIMUM		10	10	10	20	3		5	4	6	2	10	5
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		3	30	9	6	9	20	6	10	4	8	10	10
AVERAGE		3	18	9	3	8	7	6	7	3	7	9	7
MINIMUM		3	4	9		8		6	4	2	6	8	5
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	3	3	4	2	7	1	3	3	3	1	3
MAXIMUM			39	1	53		2			3			1
AVERAGE			13		21					1			
MINIMUM													
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	3	4	6	2	2					
MAXIMUM			4	8	20	40	18	2					
AVERAGE			4	5	13	12	17	1					
MINIMUM			4	3			17	1					
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		3	1		1	4	7	10	1		2		
AVERAGE		1			1	2	3	3			1		
MINIMUM					1								
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		4	6	3	6	5	5	7	2	4	6		
MAXIMUM		20	48	9	18	38	11	29	13	15	32		
AVERAGE		11	11	5	9	17	4	11	11	10	11		
MINIMUM				2	4	1		5	9	7			
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		1	2	2	3	2	3	4	5	4
MAXIMUM		2	30		7	17			1			8	15
AVERAGE		1	9		7	8						2	7
MINIMUM					7								
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	4	2	5	5	5	5	6	4	7	6
MAXIMUM		6	4	6	61	3	24	31	41	25	4	8	14
AVERAGE		2	1	3	32		5	12	15	7	2	2	5
MINIMUM					4				2	2			
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		10	1	7	1		5	4	5	5	7	5	4
AVERAGE		4	1	4	1		4	3	4	5	5	2	4
MINIMUM		2	1	2	1		4	3	3	5	3		4
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	1	8	4	3		2	7	5	21	20	
MAXIMUM		40	20	16	2	27		6	5	5	10	13	
AVERAGE		40	20	4		12		5	3	2	2	3	
MINIMUM		40	20					4	2				
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		9	4	6	42	8	6	21	10	13	8		
AVERAGE		6	2	6	23	7	5	14	7	8	8		
MINIMUM		4		6	5	6	4	8	4	6	8		

TABLE 13. COPPER—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		30	30	70		30	170	40	690	3000	820	210	110
AVERAGE		25	30	55		30	120	25	290	2333	820	185	73
MINIMUM		20	30	40		30	70	10	50	1200	820	160	30
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM		75	52	86	300	81	59	51		95	56	67	41
AVERAGE		52	52	52	115	48	59	51		49	56	42	41
MINIMUM		30	52		20	16	59	51		3	56	18	41
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2	1	5	3	3	1		2	1	1
MAXIMUM			2	2	1	6	20	7	3		4	3	
AVERAGE				1	1	2	6	4	3		3	3	
MINIMUM				1	1			3	3		3	3	
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	2	2	2	3	4	4	4	4	3	2
MAXIMUM			87	38	16			41	47	26	92	54	194
AVERAGE			87	25	8			26	27	18	44	35	176
MINIMUM			87	12				18	19	8	26	14	159
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			4	20	20			4		4	3	2	2
AVERAGE			4	20	20			4		3	3	2	2
MINIMUM			4	20	20			4		2	3	2	2

TABLE 14. IRON—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	5	15	7	4	5	5	6	6	7	10	10	13
	1	56	22		19	6	1	1	2	3	5	6	9	10	15
	1	55 56	36		19	7	1	2	4	5	5	7	9	10	14
BOSTON MASS	1	55	23		17	5	1	1	2	2	4	6	7	9	12
EVERETT MASS	1	55	26		37	9	2	3	4	6	7	9	10	12	13
ELIZABETH NJ	1	55 56	21		13	1				1	1	1	1	2	4
PAULSBORO N J	1	55 56	25		26	2			1	1	1	1	2	3	7
CAMDEN N J	1	55 56	21		32	6	1	1	2	3	4	4	5	6	15
PERTH AMBOY N J	1	55 56	23		82	6			1	1	1	1	3	5	12
TRENTON N J	1	55 56	17		34	5			1	1	3	3	5	8	8
JERSEY CITY N J	1	55 56	23		73	10	1	2	2	3	4	5	6	10	21
NEW YORK N Y	2	54 56	50		107	40	1	4	6	9	27	60	69	79	86
	3	54 55	24		67	18	1	2	3	6	7	8	20	47	58
		54 56	75		107	33	1	3	5	8	20	44	59	69	83
PHILADELPHIA PA	1	54	6	36	157	73	35	35	37	37	58	67	67	103	103
	1	55	94	1	35	9	2	4	5	6	7	9	11	13	18
	1	56	11		15	7	1	2	3	4	5	8	11	12	14
	1	54 56	111		157	12	2	3	5	6	8	9	11	15	25
	3	54	4	25	66	51		28	28	54	54	54	58	58	67
	4	56	11		44	10	1	1	3	3	6	8	10	12	28
	5	56	9		16	4		1	1	1	3	3	4	6	10
	6	56	11		19	4		1	1	2	3	3	6	7	7
	7	56	11		23	7	1	1	3	3	4	6	6	12	21
		54	10	25	157	64	28	35	37	53	55	58	63	67	103
		55	94	1	35	9	2	4	5	6	7	9	11	13	18
		56	53		44	6		1	2	3	4	5	7	11	18
		54 56	157		157	12	1	3	4	6	7	8	11	15	26
ALTOONA PA	1	56	13		18	6	1	2	3	5	6	7	7	8	12
BRISTOL PA	1	55 56	18		15	2			1	1	1	1	2	2	4
CHESTER PA	1	55 56	18		25	7	1	2	2	4	7	9	10	10	12
ERIE PA	1	56	25		18	5	1	2	3	3	4	5	6	8	12
PITTSBURGH PA	1	56	21		160	35	2	12	17	22	28	31	37	50	67
WILLIAMSPORT PA	1	55 56	23	2	66	20	3	5	6	9	15	21	26	34	43
WASHINGTON DC	1	54	26	34	101	59	45	48	51	53	56	60	63	70	75
	2	55 56	20	2	39	13	3	6	7	8	10	12	13	20	35
		54 56	46	2	101	39	7	9	13	34	45	51	55	62	70
LOUISVILLE KY	1	54	22		110	28	2	5	8	11	15	17	21	50	77
	1	55	21		58	16	2	3	4	6	15	17	18	28	37
	1	54 55	43		110	22	2	4	6	8	15	17	21	35	54
	2	54	13	3	20	8	2	3	3	6	6	7	7	12	18
	2	55	10	2	63	20	2	4	4	11	12	18	21	35	37
	2	54 55	23	2	63	13	2	3	4	6	7	11	15	18	35
	3	54	5	7	80	42	7	7	40	40	43	43	50	50	89
		54	40		110	23	3	5	6	7	11	16	20	43	58
		55	31		63	17	2	3	4	6	15	17	21	32	37
		54 55	71		110	20	2	4	6	7	12	16	20	36	50
BALTIMORE MD	1	57	18	12	130	30	13	18	20	22	24	26	27	28	32
CHARLESTON W VA	1	54	11	34	81	58	35	37	43	47	63	67	77	81	85
	4	55	16		23	8	2	2	3	4	4	12	13	14	15
		54 55	27		81	28	2	3	4	13	15	24	43	63	77
TAMPA FLA	1	54 55	30		54	13	1	1	2	4	6	8	15	24	35
ATLANTA GA	1	54 56	26		73	26	4	5	11	13	18	32	37	47	50
CHATTANOOGA TENN	3	55	14		13	5	1	2	2	3	3	4	7	8	13
	4	55 56	18		33	13	2	5	6	7	10	12	15	21	30
		55 56	32		33	9	1	2	3	5	7	8	11	13	28

TABLE 14. IRON—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10'											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
CHICAGO ILL	1	54	4	44	80	61		50	50	58	58	58	67	67	89
	1	55	28		50	15	2	3	5	8	11	14	18	24	32
	1	54 55	32		80	20	2	3	8	10	13	15	24	40	50
	2	54	30	26	155	84	45	54	67	72	77	95	103	115	128
	2	55	26	6	76	34	10	15	22	24	30	37	43	54	63
	2	54 55	56	6	155	61	18	26	37	46	56	68	75	97	115
	3	54	3	54	62	58		54	54	54	58	58	58	58	67
	4	55	29		120	21	1	4	7	9	14	15	20	35	54
		54	37	26	155	80	47	52	58	67	74	83	97	111	124
		55	83		120	23	2	6	9	13	16	22	29	38	54
		54 55	120		155	40	4	8	14	21	30	43	54	69	97
EAST ST LOUIS ILL	1	55 56	15	4	100	38	21	23	26	28	35	37	43	50	67
	2	55 56	14	1	44	17	1	5	6	15	17	18	23	23	28
		55 56	29	1	100	28	4	12	18	22	24	25	34	40	50
EAST CHICAGO IND	1	55 56	19	3	300	60	9	17	21	32	53	55	61	67	103
	2	55 56	26	4	100	31	6	7	18	24	27	31	37	48	58
	3	55 56	21	6	99	30	7	11	14	17	23	24	37	47	58
	4	55 56	20	3	110	29	3	7	10	20	23	32	37	45	50
		55 56	86	3	300	36	6	10	16	21	26	33	45	53	66
DETROIT MICH	1	53 54	31	1	142	76	8	24	43	55	86	103	110	117	128
CINCINNATI OHIO	1	54	69		99	44	19	23	30	43	47	51	56	62	69
	1	55	27		89	21	3	4	9	11	14	17	24	43	48
	1	54 55	96		99	37	6	14	21	26	41	47	52	60	67
	2	54	28	18	96	56	44	47	50	53	55	58	61	63	66
	4	54	18	3	104	49	4	20	21	40	45	50	64	67	98
	5	54	26		127	59	26	37	47	54	64	70	73	77	85
		54	133		127	49	18	25	40	46	50	56	61	66	77
		55	27		89	21	3	4	9	11	14	17	24	43	48
		54 55	160		127	45	8	19	26	42	47	52	59	65	75
YOUNGSTOWN OHIO	1	57	12	24	500	186	24	28	111	119	137	158	210	325	375
MILWAUKEE WIS	1	57	19	9	140	32	9	13	18	21	23	24	28	37	50
MINNEAPOLIS MINN	1	54 55	35		89	24	3	5	9	9	12	15	37	50	67
KANSAS CITY MO	2	54 56	25	2	68	25	6	9	11	12	21	28	35	37	58
	3	54	5	24	61	39	24	24	32	32	40	40	43	43	67
	4	55 56	9	1	34	9	1	2	2	3	3	3	7	15	21
		54 56	39	1	68	23	2	6	10	12	20	26	33	37	50
ST LOUIS MO	1	55 56	23		29	14	4	8	9	9	13	15	18	21	28
NEW ORLEANS LA	1	54 55	26		35	5	1	1	1	2	2	3	3	6	6
	2	54 55	24		40	7	1	2	2	4	5	5	6	8	13
		54 55	50		40	6	1	1	2	2	3	4	5	6	13
FT WORTH TEXAS	1	54 55	31	3	105	16	3	3	4	5	6	7	17	23	43
LAKEWORTH TEXAS	1	54	6	22	71	41	23	23	24	24	28	54	54	58	58
HOUSTON TEXAS	1	54	26	2	85	34	6	12	26	28	33	36	37	50	63
	1	55	56		29	9	2	3	4	5	7	8	11	15	19
	1	54 55	82		85	17	2	3	5	7	10	14	20	30	37
BELLAIRE TEXAS	1	54	21	1	49	11	2	3	5	6	8	11	12	13	28
	1	55	14	1	13	4	1	1	1	2	2	3	6	7	12
	1	54 55	35	1	49	8	1	2	3	5	6	7	11	12	15
DENVER COL	1	54 55	23		53	14	2	3	7	8	13	14	14	15	37
	3	54	3	43	53	48		43	43	43	50	50	50	50	58
		54	10	7	53	22	7	7	12	14	14	15	15	43	50
		55	16		53	16	2	2	3	6	10	14	14	32	37
		54 55	26		53	18	2	3	7	10	13	14	15	37	47

TABLE 14. IRON—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) $\times 10^{-1}$											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SALT LAKE CITY UTAH	2	54 55	31	2	59	21	4	9	12	15	17	20	24	31	50
ANCHORAGE ALASKA	1	54 55	40		998	85	2	13	21	47	58	67	92	103	158
LOS ANGELES CALIF		54	19	26	114	62	37	43	48	58	63	65	70	75	89
SAN FRANCISCO CALIF	1	55 56	32		8	2			1	1	2	3	3	5	6
PASADENA CALIF	1	54	21	18	59	40	21	28	32	35	43	50	52	55	57
	1	55	21		35	11	1	4	5	5	8	11	12	21	24
	1	56	4		18	7		1	1	5	5	5	7	7	18
	1	54 56	46		59	24	4	5	8	12	21	29	35	47	53
BERKELEY CALIF	1	54 55	34	4	52	21	5	9	10	13	14	15	28	39	45
SAN JOSE CALIF	1	54	26		64	25	5	14	17	19	20	23	26	40	50
	1	55	12		38	18	1	2	4	10	21	25	27	32	37
	1	56	20	2	35	12	2	5	7	9	10	11	13	23	26
	1	54 56	58		64	19	3	5	10	13	18	21	25	27	39
SAN LEANDRO CALIF	1	55 56	30		44	9	2	3	5	6	7	9	10	12	18
PORTLAND OREGON	1	54	20	16	66	41	20	26	33	36	43	47	50	54	58
	1	55	19		42	17	1	6	7	15	19	20	23	29	32
	1	54 55	39		66	29	6	15	19	23	29	33	37	47	54
	2	54	15	43	98	68	50	52	56	58	72	77	82	84	89
	5	54	10	12	63	35	12	15	23	24	32	43	47	50	58
	4	54	10	6	32	19	6	9	14	15	18	21	25	27	28
		54	55	6	98	43	15	21	27	35	44	49	54	60	79
		55	19		42	17	1	6	7	15	19	20	23	29	32
		54 55	74		98	37	7	16	21	26	32	40	49	55	72
SEATTLE WASH	1	57	20	11	100	38	11	15	24	33	35	37	47	54	67

TABLE 14. IRON—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		19	7	1	2	4	5	5	7	9	10	14
MASSACHUSETS TOTAL	55	49		37	7	1	2	3	4	6	7	9	11	13
NEW JERSEY TOTAL	55 56	130		82	5			1	1	2	3	4	6	14
NEW YORK TOTAL	54 56	75		107	33	1	3	5	8	20	44	59	69	83
PENNSYLVANIA TOTAL	54 56	275		160	12	1	2	3	5	7	8	11	17	30
DIS COLUMBIA TOTAL	54 56	46	2	101	39	7	9	13	34	45	51	55	62	70
KENTUCKY TOTAL	54 55	71		110	20	2	4	6	7	12	16	20	36	50
MARYLAND TOTAL	57	16	12	130	30	13	18	20	22	24	26	27	28	32
WEST VIRGINA TOTAL	54 55	27		81	28	2	3	4	13	15	24	43	63	77
FLORIDA TOTAL	54 55	30		54	13	1	1	2	4	6	8	15	24	35
GEORGIA TOTAL	54 56	26		73	26	4	5	11	13	18	32	37	47	50
TENNESSEE TOTAL	55 56	32		33	9	1	2	3	5	7	8	11	13	28
ILLINOIS TOTAL	54 56	149		155	38	4	9	14	22	27	38	49	63	91
INDIANA TOTAL	55 56	86	3	300	36	6	10	16	21	26	33	45	53	66
MICHIGAN TOTAL	53 54	31	1	142	76	8	24	43	55	86	103	110	117	128
OHIO TOTAL	54 57	172		500	54	9	20	28	43	48	54	61	69	93
WISCONSIN TOTAL	57	19	9	140	32	9	13	18	21	23	24	28	37	50
MINNESOTA TOTAL	54 55	35		89	24	3	5	9	9	12	15	37	50	67
MISSOURI TOTAL	54 56	62		68	20	3	7	9	11	14	20	26	33	41
LOUISIANA TOTAL	54 55	50		40	6	1	1	2	2	3	4	5	6	13
TEXAS TOTAL	54 55	154		105	15	2	3	4	6	8	11	18	26	40
COLORADO TOTAL	54 55	26		53	18	2	3	7	10	13	14	15	37	47
UTAH TOTAL	54 55	31	2	59	21	4	9	12	15	17	20	24	31	50
ALASKA TOTAL	54 55	40		998	85	2	13	21	47	58	67	92	103	158
CALIFORNIA TOTAL	54 56	220		114	20	1	4	6	9	12	19	26	38	52
OREGON TOTAL	54 55	74		98	37	7	16	21	26	32	40	49	55	72
WASHINGTON TOTAL	57	20	11	100	38	11	15	24	33	35	37	47	54	67
NEW ENGLND TOTAL	55 56	85		37	7	1	2	3	4	6	7	9	11	14
MID ATLNTC TOTAL	54 56	480		160	14	1	1	2	3	5	7	11	19	43
MID EAST TOTAL	54 57	162		130	29	3	5	9	13	18	26	38	51	66
SOUTH EAST TOTAL	54 56	88		73	15	1	2	4	6	10	12	19	30	40
MID WEST TOTAL	53 57	457		500	46	6	13	20	26	38	47	56	67	97
GRT PLAINS TOTAL	54 56	97		89	21	3	6	9	10	13	19	28	36	52
GULF SOUTH TOTAL	54 55	204		105	13	1	2	3	5	6	8	13	22	36
ROCKY MNTN TOTAL	54 55	57		59	20	3	6	10	13	15	17	21	32	48
PAC COAST TOTAL	54 57	354		998	32	2	5	9	14	20	28	39	51	66
GRAND TOTAL	53 57	1985		998	26	2	4	7	11	16	22	33	45	65

TABLE 14. IRON—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		14	2		1	1	1	2	3	4	4	5
LAKEHURST N J	1	55 56	19		21	2				1	1	1	1	1	2
KANAWHA CO W VA	1	54 55	23		51	12		1	1	1	4	7	9	32	47
HILLSBOROUGH CO FLA	1	54	4	20	36	30		21	21	32	32	32	35	35	37
FULTON CO GEORGIA	1	54	7	10	45	29	10	10	26	28	30	30	32	37	37
HAMILTON COUNTY OHIO	1	54 55	36	4	75	26	5	7	10	12	15	24	35	47	55
TONKA BAY MINN	1	54	9	32	84	46	30	32	37	40	43	43	47	50	67
DENVER COUNTY COLO	1	54 55	10	3	25	14	3	5	6	12	16	17	17	18	21
SALT LAKE CO UTAH	1	54	5	1	47	30	1	1	32	32	37	37	43	43	50
MULTNOMAH CNTY ORE	1	54	12	2	47	27	2	13	20	21	29	31	32	40	43
GRAND TOTAL		54 56	148		84	19		1	3	6	12	19	30	37	49
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12	2	23	7	2	2	2	5	5	6	8	9	13

TABLE 14. IRON—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		5	9	10	10	11	5	10	15	5	19	17	14
AVERAGE		2	7	4	3	7	3	9	9	5	11	11	10
MINIMUM			5	2		5		7	5	5	3	7	6
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		17	7	2		6	10	6	11	14	11	5	8
AVERAGE		17	5	1		6	5	4	4	14	10	4	8
MINIMUM		17	3			6		2	2	14	9	4	8
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		4	37	14	6	31	12	12	10	8	12	7	13
AVERAGE		3	15	8	6	21	8	7	5	5	12	7	11
MINIMUM		3	1	2	6	11	4	4		3	12	7	9
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		1		13	4				2	2		1	7
AVERAGE				4	1				2	2		1	3
MINIMUM									2	2		1	
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		7	3	26	15	2					2		2
AVERAGE		6	2	9	3	1					1		2
MINIMUM		6											2
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		6	14	25	32		2	4	6	3	4		6
AVERAGE		4	6	11	16		2	4	5	2	3		5
MINIMUM		2	1	3			2	4	5	1	3		4
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		5	1	27	82				3			11	5
AVERAGE		1	1	7	18				3			3	2
MINIMUM			1						3				
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		1	7	5	34			3			21	4	8
AVERAGE			4	5	34			1			21	4	6
MINIMUM			2	5	34						21	4	3
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		3	21	35	73		9		17	3		2	5
AVERAGE		2	16	14	20		6		10	3		2	3
MINIMUM		2	6	5	1		3		3	3		2	2
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		4	5	5	8	5	10	7	5	6	6	7	7
MAXIMUM		73	22	95	66	74	81	86	76	53	107	88	81
AVERAGE		27	8	52	36	49	26	42	21	27	54	37	23
MINIMUM		3		2		8		1	1	4	6	2	
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		20	16	14	15	19	12	13	13	10	8	8	9
MAXIMUM		157	93	37	66	63	27	22	32	12	10	11	26
AVERAGE		20	15	9	15	12	12	6	11	7	6	6	10
MINIMUM				3			2		3	2	3	3	2
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			5	7	5	9			18	7	11	8	
AVERAGE			5	7	2	6			18	5	5	8	
MINIMUM			5	7		2			18	3		8	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			2	2				5		15	1	4	2
AVERAGE			2	2				3		5		2	1
MINIMUM			2	2				2					1
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			10		10	5	10	19	9	25	2		12
AVERAGE			10		7	2	6	10	6	12	2		12
MINIMUM			10		4		2	1	2	4	2		12
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		6	2	4	8	2	5	4		18	12	17	12
AVERAGE		3	2	3	3	2	5	4		9	5	11	7
MINIMUM			2	2		2	5	4		3		6	4
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		31	38	89			30	2		50	55	160	32
AVERAGE		21	18	59			22	1		43	39	91	32
MINIMUM		11	4	28			18			36	23	22	32

TABLE 14. IRON—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			66	34	27	41	4	44	21	36	8	15	6
AVERAGE			37	34	24	24	3	44	21	26	5	9	5
MINIMUM			9	34	21	10	2	44	21	15	3	6	5
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	6	1	5	6	6	4	7	6	3	1	
MAXIMUM		20	61	50	101	74	78	77	69	72	59	4	
AVERAGE		20	31	50	50	29	46	50	35	44	44	4	
MINIMUM		20	8	50	7	2	8	13	3	10	15	4	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	6	4	4	13	13	12	6	1	6
MAXIMUM		12	21	33	70	110	80	63	36	48	28	5	36
AVERAGE		7	9	33	43	78	30	15	13	16	9	5	12
MINIMUM		3	4	33	4	38	7			2	4	5	2
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		25	26	31	130	14	30	26	54	24			
AVERAGE		25	24	27	55	14	25	22	29	24			
MINIMUM		25	22	24	12	14	20	18	13	24			
CHARLESTON W VA	54 55												
NUMBER OF SAMPLES			1	3	5	5	3	2	1	1	3	2	1
MAXIMUM			15	81	79	72	50	4	22	13	12	2	15
AVERAGE			15	50	53	38	25	4	22	13	6	1	15
MINIMUM			15	5	34	3	2	4	22	13	4		15
TAMPA FLA	54 55												
NUMBER OF SAMPLES		2	2	3	5	5	2	2	2	3	1	2	1
MAXIMUM		5	14	30	54	35	41	3	20	12	7	2	2
AVERAGE		2	11	17	20	19	22	2	14	9	7	2	2
MINIMUM			8				4	1	8	5	7	2	2
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	3	6	5	3	1	3	1		1	1	1
MAXIMUM		37	12	73	47	64	11	13	11		62	18	20
AVERAGE		37	8	38	29	37	11	6	11		62	18	20
MINIMUM		37	3	13	4	4	11		11		62	18	20
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			15	11	5	29		5	10	27	33	8	30
AVERAGE			7	9	2	21		5	5	13	14	5	16
MINIMUM				7		13		5	3	4	2	2	3
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	12	20	14	9	8	16	13	8
MAXIMUM		49	76	30	54	107	155	134	71	62	120	127	103
AVERAGE		21	44	14	32	41	51	45	29	36	46	35	54
MINIMUM		3	14			3	6		6	2	4		29
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		42	23	100	61	44	36	47	39	55	5	28	23
AVERAGE		20	12	61	42	27	31	47	29	25	5	23	20
MINIMUM		3	1	23	23	11	24	47	24	6	5	18	18
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		300	32	98	110	100	99	46	78	60	100	40	120
AVERAGE		60	15	39	45	62	45	24	35	40	50	14	27
MINIMUM		6	3	4	19	36	7	4	11	19	25	3	3
DETROIT MICH	53 54												
NUMBER OF SAMPLES			1	3	4	2	1					20	
MAXIMUM			22	137	133	112	117					142	
AVERAGE			22	130	105	97	117					61	
MINIMUM			22	119	85	83	117					1	
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	8	43	20	22	19	8	9	12	7	3	6
MAXIMUM		70	47	127	99	72	90	68	59	51	89	74	38
AVERAGE		26	19	57	54	45	56	39	32	26	24	36	25
MINIMUM		2	1		9	3	14	3	4			10	16
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				75	300	130	24	210	360	25	500		
AVERAGE				75	205	130	24	160	300	25	325		
MINIMUM				75	110	130	24	110	240	25	150		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		26	140	46	94	26	9	23	24	33	22		
AVERAGE		22	74	28	55	21	9	21	18	26	22		
MINIMUM		18	9	10	30	16	9	19	13	20	22		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	3	4	5	4	3		5	4	3	2	1
MAXIMUM		9	4	89	68	51	44		22	17	12	3	10
AVERAGE		9	1	57	48	40	19		10	13	8	2	10
MINIMUM		9		15	11	35	6		5	9	3	1	10

TABLE 14. IRON—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	2	8	7	5	3	2	4	1	1	1	1
MAXIMUM		34	26	68	61	37	38	6	47	14	2	12	34
AVERAGE		19	22	37	29	15	20	4	21	14	2	12	34
MINIMUM		3	18	8	7	1	5	3	2	14	2	12	34
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		27	29		9	16	14	20	25	18	8	13	29
AVERAGE		17	17		8	8	13	12	18	18	8	10	27
MINIMUM		7	5		8		13	4	10	18	8	9	26
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	6	6	6	4	4	4	5	3
MAXIMUM		2	6	2	3	34	40	6	8	13	6	6	12
AVERAGE		1	3	1	2	12	15	4	5	8	3	3	6
MINIMUM			2		1		2	2	3		1		
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	2	4	4	5	2	2	2	2	2	2	2
MAXIMUM		6	7	105	46	38	18	4	8	10	6	5	20
AVERAGE		5	5	44	19	20	17	3	7	6	6	4	13
MINIMUM		5	3	3	4	3	17	3	6	3	6	4	7
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES		1	7	9	5	8	14	7	3	6	6	9	7
MAXIMUM		36	37	85	47	36	68	28	12	26	17	18	61
AVERAGE		38	19	21	13	17	28	7	7	16	7	9	17
MINIMUM		38	4			4			3	5	3	2	3
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	3	4	2	3	3	2	3	3	4	2	3
MAXIMUM		13	12	9	5	32	49	14	25	12	6	6	13
AVERAGE		5	6	6	3	12	17	9	15	9	4	3	12
MINIMUM		1	1	3	2	2	2	5	8	6	3	1	12
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		13	3	53	48	15	53	31	14	12	14	15	10
AVERAGE		7	2	44	31	10	32	19	10	9	14	15	5
MINIMUM		2	2	35	15	6	3	8	7	7	14	15	
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		27	45	29	20	29	59	19	23	17	18	31	15
AVERAGE		13	27	21	15	15	39	14	20	16	13	17	11
MINIMUM		2	18	14	10	2	5	9	17	16	9	4	4
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	2	4	8	4	7	1	3	3	3	1	3
MAXIMUM		14	13	61	998	183	165	149	111	100	96	7	24
AVERAGE		14	6	29	195	115	70	149	58	66	64	7	13
MINIMUM		14			2	67	20	149	16	46	4	7	2
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	4	6	2	2					
MAXIMUM			26	114	84	73	66	45					
AVERAGE			26	93	68	52	54	44					
MINIMUM			26	72	56	36	43	44					
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		3	6	3	5	6	8	7	1	4	1	3	
AVERAGE		2	5	1	5	5	6	2	1	1		1	
MINIMUM			5		5	4	5		1				
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		4	5	2	6	5	5	7	2	4	6		
MAXIMUM		35	32	52	51	55	59	38	29	34	53		
AVERAGE		14	18	31	26	22	35	22	25	18	29		
MINIMUM		5		11	6			5	22	8	3		
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	4		2	2	2	3	2	3	4	5	4
MAXIMUM		13	35		52	49	45	49	10	21	18	42	39
AVERAGE		7	22		45	45	29	26	10	13	10	17	25
MINIMUM		4	15		39	42	13	9	10	5	5	6	14
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	3	2	5	5	5	5	6	4	7	6
MAXIMUM		35	38	64	61	51	40	28	27	48	21	19	26
AVERAGE		26	20	23	52	22	15	13	23	26	16	9	12
MINIMUM		11	7	2	43	5	2		20	14	9	2	
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		6	3	8	4	7	19	14	44	10	12	23	2
AVERAGE		2	3	6	4	7	18	10	18	10	10	8	2
MINIMUM			3	4	4	7	18	7	9	10	6		2
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	2	9	4	3		2	7	5	21	20	
MAXIMUM		16	66	71	47	70		29	36	42	98	86	
AVERAGE		16	61	38	34	56		22	19	21	40	40	
MINIMUM		16	57		1	43		16	7	6	6	16	
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		57	36	34	24	100	51	66	41	33	37		
AVERAGE		51	23	34	17	70	38	56	26	22	37		
MINIMUM		45	11	34	11	34	25	47	11	14	37		

TABLE 14. IRON—SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) $\times 10^{-1}$

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		3		14		2	5	1	4	4	5	5	5
AVERAGE		2		9		2	2		2	3	5	2	2
MINIMUM		2		4		2			1	2	5		
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM				13	21	2							
AVERAGE				5	7	1							
MINIMUM													
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2	1	5	3	3	1		2	1	1
MAXIMUM			9	7	32	45	51		4		2		
AVERAGE			3	7	32	28	28		4		2		
MINIMUM				7	32	4			4		2		
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	4	2	5	3	4	4	4	4	3	2
MAXIMUM			13	75	58	55	56	72	15	19	11	6	14
AVERAGE			13	47	46	38	43	41	10	11	8	5	9
MINIMUM			13	14	35	23	32	15	8	5	6	5	4
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			3	5	18			20		17	25	18	6
AVERAGE			3	5	18			20		14	21	18	6
MINIMUM			3	5	18			20		11	17	18	6
NONURBAN													
PT WORONZOF ALASKA	55 56												
NUMBER OF SAMPLES		1		1	1	1		1	2	1	1	1	1
MAXIMUM		2		2	2	9		8	13	8	5	23	2
AVERAGE		2		2	2	8		8	9	8	5	23	2
MINIMUM		2		2	2	6		8	5	8	5	23	2

TABLE 15. LEAD—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) $\times 10^{2}$											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	2	13	7	2	3	4	5	7	8	9	10	10
	1	56	22	1	17	5	1	2	3	3	4	4	5	8	12
	1	55 56	36	1	17	5	2	2	3	4	5	6	7	8	12
BOSTON MASS	1	55	23	2	10	5	2	2	3	3	4	5	6	8	9
EVERETT MASS	1	55	26	1	170	19	2	3	3	4	5	6	12	17	20
ELIZABETH N J	1	55 56	21	3	20	7	3	3	4	5	6	6	9	11	16
PAULSBORO N J	1	55 56	25		13	2		1	1	1	2	2	4	5	6
CAMDEN N J	1	55 56	21	3	22	8	3	4	4	5	7	8	9	12	15
PERTH AMBOY N J	1	55 56	23	1	14	4	1	1	2	2	3	4	5	6	9
TRENTON N J	1	55 56	17	1	10	3	1	1	1	2	2	2	6	7	8
JERSEY CITY N J	1	55 56	23	2	26	7	2	3	4	5	6	7	8	9	11
NEW YORK N Y	2	54 56	50	2	89	24	5	8	11	17	21	24	29	33	45
	3	54 55	25	2	71	15	3	5	6	7	9	12	14	20	33
		54 56	76	2	89	21	4	6	8	11	15	21	24	32	41
PHILADELPHIA PA	1	54	6	5	212	47	5	5	7	7	7	20	20	33	33
	1	55	94	1	22	5	2	2	3	4	4	5	6	7	10
	1	56	11	4	15	7	3	4	4	6	7	8	8	9	11
	1	54 56	111	1	212	8	2	3	3	4	5	5	6	7	11
	3	54	4	4	19	9		4	4	6	6	6	7	7	20
	4	56	11	2	56	16	2	3	4	7	8	9	19	20	50
	5	56	9	2	18	5	1	2	2	4	4	4	5	5	7
	6	56	11	1	27	7	1	2	2	3	5	6	8	10	12
	7	56	11	3	40	13	3	5	6	6	7	12	12	27	30
		54	10	4	212	31	4	5	6	6	7	7	19	20	33
		55	94	1	22	5	2	2	3	4	4	5	6	7	10
		56	53	1	56	10	2	3	4	5	6	7	9	12	26
		54 56	157	1	212	8	2	3	3	4	5	6	7	9	16
ALTOONA PA	1	56	13	1	7	3	1	1	2	2	2	3	3	3	5
BRISTOL PA	1	55 56	18		12	2		1	1	1	1	2	3	3	4
CHESTER PA	1	55	18		12	3		1	1	1	2	2	3	4	5
ERIE PA	1	56	25	1	6	2	1	1	1	2	2	2	3	3	4
PITTSBURGH PA	1	56	21	2	27	10	2	3	4	6	10	11	12	16	20
WILLIAMSPORT PA	1	55 56	23	1	16	9	3	5	6	7	10	11	12	14	15
WASHINGTON DC	1	54	26	7	39	20	10	11	13	17	19	21	22	26	33
	2	55 56	20	5	25	11	5	6	7	8	9	10	12	14	20
		54 56	46	5	39	16	6	8	10	11	14	18	20	22	26
LOUISVILLE KY	1	54	22	2	27	12	4	5	6	7	9	14	15	20	25
	1	55	21	2	130	25	3	8	10	11	14	19	22	27	50
	1	54 55	43	2	130	18	4	5	7	9	12	14	19	22	27
	2	54	13	2	55	20	2	4	7	7	16	23	24	30	53
	2	55	10	3	54	29	3	7	13	24	26	27	41	50	53
	2	54 55	23	2	55	24	2	6	7	13	23	26	30	41	53
	3	54	5	1	6	2			1	1	1	1	3	3	6
		54	40	1	55	13	1	4	5	6	7	14	16	23	27
		55	31	2	130	26	3	8	10	12	19	23	26	41	53
		54 55	71	1	130	19	2	4	6	9	13	16	23	26	48
BALTIMORE MD	1	57	18	3	32	9	4	5	5	7	7	8	9	9	10
CHARLESTON W VA	1	54	11	2	25	10	2	3	5	8	9	11	13	16	18
	4	55	16	1	5	3	1	1	2	2	3	3	4	4	4
		54 55	27	1	25	6	1	2	2	3	4	4	5	9	13
TAMPA FLA	1	54 55	31	1	43	8	2	3	3	4	5	6	7	11	14
ATLANTA GA	1	54 56	26	1	98	17	3	6	10	11	12	16	19	20	23
CHATTANOOGA TENN	3	55	14	1	8	3	1	1	2	2	2	3	5	5	8
	4	55 56	18	2	27	11	5	6	7	9	10	11	14	14	18
		55 56	32	1	27	8	1	2	3	5	6	8	9	12	16

TABLE 15. LEAD—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
CHICAGO ILL	1	54	4	8	122	47		8	8	20	20	20	41	41	125
	1	55	28	1	34	11	3	5	6	8	11	12	13	14	16
	1	54 55	32	1	122	15	3	5	7	10	12	13	14	16	22
	2	54	30	9	91	34	14	22	23	24	26	32	41	45	55
	2	55	26	4	47	18	7	10	13	14	15	18	19	24	27
	2	54 55	56	4	91	26	10	13	16	19	23	25	27	39	48
	3	54	3	6	17	11		6	6	6	10	10	10	10	18
	4	55	29		28	7	1	2	3	4	5	6	8	10	16
		54	37	6	122	33	10	18	22	23	26	30	39	45	55
		55	83		47	12	2	4	5	7	10	13	14	16	25
		54 55	120		122	18	3	5	8	11	13	16	22	26	40
EAST ST LOUIS ILL	1	55 56	15	4	30	12	6	6	8	9	12	12	15	16	18
	2	55 56	14	2	41	7	1	2	2	3	3	5	6	8	13
		55 56	29	2	41	9	2	3	5	6	8	8	12	13	17
EAST CHICAGO IND	1	55 56	19	2	64	16	3	5	6	8	12	13	15	20	27
	2	55 56	26	2	42	14	2	3	7	8	10	14	18	22	29
	3	55 56	21	1	56	9	2	3	4	5	7	8	10	11	14
	4	55 56	20	1	63	9	1	2	3	3	4	5	7	14	18
		55 56	86	1	64	12	2	3	4	6	8	10	13	18	26
DETROIT MICH	1	53 54	33	2	58	24	15	18	20	21	22	23	26	29	37
CINCINNATI OHIO	1	54	73	2	146	27	7	9	11	14	18	21	26	40	68
	1	55	27	1	92	18	4	6	8	10	14	17	19	22	27
	1	54 55	100	1	146	25	6	8	10	13	17	20	22	33	55
	2	54	20	4	63	15	4	7	8	10	11	12	16	20	22
	4	54	22	2	25	10	2	4	6	7	9	10	12	17	21
	5	54	28	3	47	14	4	6	6	7	8	10	18	20	33
		54	143	2	146	20	5	7	8	10	12	17	20	26	46
		55	27	1	92	18	4	6	8	10	14	17	19	22	27
		54 55	170	1	146	20	5	7	8	10	13	17	20	25	46
YOUNGSTOWN OHIO	1	57	12	1	17	4	1	1	2	2	3	3	4	5	12
MILWAUKEE WIS	1	57	19	2	61	9	2	3	3	4	5	5	6	10	16
MINNEAPOLIS MINN	1	54	16	1	10	4	2	3	3	4	4	5	5	6	7
	1	55	20	1	16	5	2	3	3	4	4	5	6	7	8
	1	54 55	36	1	16	5	2	3	3	4	4	5	5	7	8
KANSAS CITY MO	2	54 56	25	4	21	10	5	7	8	9	10	10	12	14	19
	3	54	6	4	15	6	4	4	4	4	5	5	5	8	8
	4	55 56	9		4	1		1	1	1	1	1	2	2	3
		54 56	40		21	8	1	3	4	5	8	9	10	12	15
ST LOUIS MO	1	55 56	23	4	23	9	4	5	5	6	7	8	10	12	19
NEW ORLEANS LA	1	54 55	26	1	9	3	1	1	2	2	2	3	4	5	6
	2	54 55	24	1	25	4	1	1	1	2	2	2	3	4	16
		54 55	50	1	25	4	1	1	1	2	2	3	3	5	7
FT WORTH TEXAS	1	54 55	32	1	23	5	1	2	2	3	3	4	5	7	12
LAKEWORTH TEXAS	1	54	6		16	7	1	1	4	4	7	9	9	11	11
HOUSTON TEXAS	1	54	26	2	69	12	6	7	8	9	10	10	11	12	15
	1	55	56	3	170	42	5	8	12	16	31	37	55	65	92
	1	54 55	82	2	170	33	5	7	10	11	14	24	33	59	73
BELLAIRE TEXAS	1	54	21	4	84	15	5	8	9	9	11	12	13	14	27
	1	55	14	1	28	6	1	2	2	3	4	4	8	9	13
	1	54 55	35	1	84	12	2	3	5	8	9	10	12	13	27
DENVER COL	1	54 55	23	4	39	17	5	9	10	12	16	17	20	22	33
		54 55	26	3	39	15	4	5	9	10	12	17	18	22	27
SALT LAKE CITY UTAH	2	54 55	31	1	47	18	5	10	11	13	14	15	18	22	41
ANCHORAGE ALASKA	1	54 55	42		57	11	1	1	3	5	7	9	11	20	31
LOS ANGELES CALIF		54	19		141	36	11	13	18	25	26	27	33	50	61
SAN FRANCISCO CALIF	1	55 56	32		3	1				1	1	1	1	2	2

TABLE 15. LEAD— URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
PASADENA CALIF	1	54	23	1	266	57	18	24	30	34	41	48	55	65	139
	1	55	21	1	23	10	3	4	6	7	9	10	11	16	21
	1	56	4	2	13	7		2	2	6	6	6	7	7	13
	1	54 56	48	1	266	32	3	7	8	11	18	23	34	45	65
BERKELEY CALIF	1	54 55	35	2	193	30	6	8	11	14	20	25	27	37	61
SAN JOSE CALIF	1	54	27	1	44	11	4	5	5	6	8	9	11	14	18
	1	55	12	3	32	12	3	4	9	10	10	11	11	16	18
	1	56	20	1	16	4	1	2	2	3	4	4	5	6	8
	1	54 56	59	1	44	9	2	3	4	5	6	8	10	12	16
SAN LEANDRO CALIF	1	55 56	30	5	24	13	6	6	9	12	13	14	15	18	20
PORTLAND OREGON	1	54	20	5	71	22	8	10	13	14	14	16	22	27	45
	1	55	19	1	20	9	2	5	6	7	9	10	11	15	16
	1	54 55	39	1	71	16	5	7	9	10	13	14	15	19	27
	2	54	15	2	61	22	4	6	8	13	18	20	33	41	45
	5	54	10	13	63	34	13	16	17	18	26	27	52	53	55
	4	54	10	5	43	19	5	6	8	9	12	18	27	33	37
		54	55	2	71	24	6	9	13	14	17	22	27	41	53
		55	19	1	20	9	2	5	6	7	9	10	11	15	16
		54 55	74	1	71	20	5	7	9	13	15	17	22	32	45
SEATTLE WASH	1	57	20	1	16	6	2	3	3	4	4	5	7	8	12

TABLE 15. LEAD—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) × 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36	1	17	5	2	2	3	4	5	6	7	8	12
MASSACHUSETS TOTAL	55	49	1	170	12	2	2	3	4	5	5	8	10	17
NEW JERSEY TOTAL	55 56	130		26	5	1	2	2	3	4	5	6	8	11
NEW YORK TOTAL	54 56	76	2	89	21	4	6	8	11	15	21	24	32	41
PENNSYLVANIA TOTAL	54 56	275		212	7	1	2	3	3	4	5	6	9	14
DIS COLUMBIA TOTAL	54 56	46	5	39	16	6	8	10	11	14	18	20	22	26
KENTUCKY TOTAL	54 55	71	1	130	19	2	4	6	9	13	16	23	26	48
MARYLAND TOTAL	57	18	3	32	9	4	5	5	7	7	8	9	9	10
WEST VIRGINA TOTAL	54 55	27	1	25	6	1	2	2	3	4	4	5	9	13
FLORIDA TOTAL	54 55	31	1	43	8	2	3	3	4	5	6	7	11	14
GEORGIA TOTAL	54 56	26	1	98	17	3	6	10	11	12	16	19	20	23
TENNESSEE TOTAL	55 56	32	1	27	8	1	2	3	5	6	8	9	12	16
ILLINOIS TOTAL	54 56	149		122	17	2	5	7	9	12	14	19	24	37
INDIANA TOTAL	55 56	86	1	64	12	2	3	4	6	8	10	13	18	26
MICHIGAN TOTAL	53 54	33	2	58	24	15	18	20	21	22	23	26	29	37
OHIO TOTAL	54 57	182	1	146	19	4	6	8	9	12	16	19	24	45
WISCONSIN TOTAL	57	19	2	61	9	2	3	3	4	5	5	6	10	16
MINNESOTA TOTAL	54 55	36	1	16	5	2	3	3	4	4	5	5	7	8
MISSOURI TOTAL	54 56	63		23	8	2	4	5	6	7	9	10	12	18
LOUISIANA TOTAL	54 55	50	1	25	4	1	1	1	2	2	3	3	5	7
TEXAS TOTAL	54 55	155		170	21	2	4	6	8	10	11	15	31	62
COLORADO TOTAL	54 55	26	3	39	15	4	5	9	10	12	17	18	22	27
UTAH TOTAL	54 55	31	1	47	18	5	10	11	13	14	15	18	22	41
ALASKA TOTAL	54 55	42		57	11	1	1	3	5	7	9	11	20	31
CALIFORNIA TOTAL	54 56	224		266	19	1	3	5	7	10	13	18	25	45
OREGON TOTAL	54 55	74	1	71	20	5	7	9	13	15	17	22	32	45
WASHINGTON TOTAL	57	20	1	16	6	2	3	3	4	4	5	7	8	12
NEW ENGLND TOTAL	55 56	85	1	170	9	2	2	3	4	4	5	7	9	14
MID ATLNTC TOTAL	54 56	481		212	9	1	2	3	4	5	6		11	
MID EAST TOTAL	54 57	162	1	130	15	2	4	6	8	10	13	17	22	30
SOUTH EAST TOTAL	54 56	89	1	98	10	2	3	4	6	7	10	11	14	21
MID WEST TOTAL	53 57	469		146	17	3	5	7	9	12	15	19	23	37
GRT PLAINS TOTAL	54 56	99		23	7	2	3	4	5	6	7	8	10	15
GULF SOUTH TOTAL	54 55	205		170	17	1	2	3	5	7	10	12	21	53
ROCKY MNTN TOTAL	54 55	57	1	47	16	4	8	10	12	14	16	18	22	35
PAC COAST TOTAL	54 57	360		266	17	1	3	5	7	10	13	17	25	43
GRAND TOTAL	53 57	2007		266	14	2	3	4	6	8	11	15	20	32

TABLE 15. LEAD—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		9	2			1	1	1	2	2	3	5
LAKEHURST N J	1	55 56	19		3	1				1	1	1	1	2	2
KANAWHA CO W VA	1	54 55	23		45	3			1	1	1	1	2	3	7
HILLSBOROUGH CO FLA	1	54	4	3	5	4		3	3	4	4	4	4	4	5
FULTON CO GEORGIA	1	54	8	1	21	8	1	3	3	4	7	8	10	10	10
HAMILTON COUNTY OHIO	1	54 55	36		18	5		1	1	2	4	5	5	10	12
TONKA BAY MINN	1	54	9		9	3	1	1	2	3	4	4	4	5	5
DENVER COUNTY COLO	1	54 55	10		7	1			1	1	1	1	2	2	4
SALT LAKE CO UTAH	1	54	5		3	1			1	1	1	1	1	1	3
MULTNOMAH CNTY ORE	1	54	12	1	9	4	1	2	3	3	3	4	4	7	9
GRAND TOTAL		54 56	149		45	3		1	1	1	2	3	4	5	9
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		11	3		1	1	1	1	2	2	3	10

TABLE 15. LEAD—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	5	4	3	3	3	4	1	4	3	2
MAXIMUM		2	6	9	4	5	4	8	9	8	14	17	12
AVERAGE		1	5	5	3	3	3	6	6	8	10	11	11
MINIMUM		1	4	3	2	2	2	5	3	8	7	7	10
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		8	4	3	3	5	6	9	8	8	8	9	10
AVERAGE		8	4	2	3	5	4	6	4	8	6	7	10
MINIMUM		8	4	2	3	5	2	3	3	8	5	6	10
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		17	170	5	3	15	100	19	6	13	3	60	17
AVERAGE		10	62	3	3	9	36	9	3	8	3	60	10
MINIMUM		3	5	2	3	4	3	3	1	4	3	60	4
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		20	4	17	11	5		4	16	13		3	10
AVERAGE		10	3	10	5	5		4	10	13		3	9
MINIMUM		6	3	6	4	5		4	5	13		3	9
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		13	7	5	4	2	1	2	1		6		4
AVERAGE		9	3	4	2	1	1	1	1		3		4
MINIMUM		6	1	3	1	1	1		1				4
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		7	16	15	22		4	5	12	6	9		9
AVERAGE		6	8	12	12		4	5	11	5	7		8
MINIMUM		5	4	8	3		4	5	11	4	6		7
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		6	1	14	9			2	8		6	11	5
AVERAGE		3	1	6	4			2	5		4	6	3
MINIMUM		1	1	3	2			2	2		2	2	2
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		2	7	6	8	1	3	2	1		10	2	9
AVERAGE		1	4	6	8	1	3	1	1		10	2	5
MINIMUM		1	2	6	8	1	3	1	1		10	2	2
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		5	11	25	26		7	3	9	5		3	5
AVERAGE		4	9	12	11		5	2	9	5		3	4
MINIMUM		3	6	5	3		4	2	9	5		3	4
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		4	6	5	8	5	10	7	5	6	6	7	7
MAXIMUM		80	23	52	57	71	41	39	31	55	89	32	68
AVERAGE		39	13	20	22	34	15	15	12	26	29	16	20
MINIMUM		10	3	2	7	11	3	4	2	9	10	5	2
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		20	16	14	15	19	12	13	13	10	8	8	9
MAXIMUM		212	31	11	20	56	26	8	12	20	8	9	40
AVERAGE		19	6	5	6	11	9	3	6	5	5	5	13
MINIMUM		2	1	2	2	2	2	1	2	2	3	2	4
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			2	3	2	3			5	2	7	3	
AVERAGE			2	3	1	2			5	2	5	3	
MINIMUM			2	3	1	2			5	2	4	3	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			2	4	1	1		4	1	12	4	2	3
AVERAGE			2	4	1			2	1	4	2	1	2
MINIMUM			2	4	1			1	1	1	1	1	2
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			3		3	2	6	3	5	12	1		2
AVERAGE			3		2	1	3	2	3	5	1		2
MINIMUM			3		2		1	1	1	2	1		2
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		3	1	3	4	2	2	2		6	6	4	4
AVERAGE		2	1	3	2	1	2	2		4	3	3	2
MINIMUM		2	1	3	1	1	2	2		2	1	3	2
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		6	12	25			12	4		15	15	27	19
AVERAGE		3	5	16			10	4		13	13	18	19
MINIMUM		2	2	6			9	4		12	11	10	19

TABLE 15. LEAD—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			11	10	11	16	4	14	14	16	10	14	6
AVERAGE			8	10	8	10	2	14	14	15	8	10	5
MINIMUM			4	10	6	6	1	14	14	14	7	5	4
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	6	1	5	6	6	4	7	6	3	1	
MAXIMUM		14	21	12	12	34	39	25	33	27	25	6	
AVERAGE		14	14	12	9	14	21	18	16	19	23	6	
MINIMUM		14	6	12	7	5	8	10	5	14	21	6	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	6	4	4	13	13	12	6	1	6
MAXIMUM		3	23	25	9	20	24	47	54	46	130	96	55
AVERAGE		2	15	25	5	10	10	12	13	24	50	96	24
MINIMUM		2	4	25	1	3	1	2	2	7	15	96	5
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		10	5	10	32	3	7	9	10	7			
AVERAGE		10	5	9	19	3	6	8	7	7			
MINIMUM		10	5	8	8	3	5	8	4	7			
CHARLESTON W VA	54 55												
NUMBER OF SAMPLES			1	3	5	5	3	2	1	1	3	2	1
MAXIMUM			2	13	25	11	5	2	3	4	5	2	5
AVERAGE			2	8	13	6	3	1	3	4	4	1	5
MINIMUM			2	4	3	1	2	1	3	4	4	1	5
TAMPA FLA	54 55												
NUMBER OF SAMPLES		2	2	4	5	5	2	2	2	3	1	2	1
MAXIMUM		7	14	9	11	7	33	6	21	43	10	11	7
AVERAGE		5	10	4	5	4	22	5	14	16	10	8	7
MINIMUM		3	6	2	2	3	12	4	7	1	10	5	7
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	3	6	5	3	1	3	1		1	1	1
MAXIMUM		22	20	23	24	35	8	12	11		98	16	10
AVERAGE		22	17	15	14	14	8	8	11		98	16	10
MINIMUM		22	13	9	3	1	8	3	11		98	16	10
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM		2	18	11	3	14		9	12	14	27	9	23
AVERAGE		2	6	8	2	11		9	8	7	12	5	13
MINIMUM		2	1	3	1	8		9	2	2	6	2	3
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	12	20	14	9	8	16	13	8
MAXIMUM		20	40	14	25	122	57	44	24	27	91	53	52
AVERAGE		9	22	6	15	26	15	13	13	20	29	19	19
MINIMUM		3	9	2	6	2	5		4	2	5	4	1
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		12	8	17	8	41	16	30	16	18	2	6	9
AVERAGE		6	5	9	7	22	10	30	12	11	2	5	6
MINIMUM		2	2	2	6	3	6	30	8	3	2	5	3
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		10	8	25	64	30	56	14	21	22	31	7	16
AVERAGE		4	5	14	33	17	25	7	9	7	16	4	7
MINIMUM		1	2	2	8	7	2	1	3	2	8	3	2
DETROIT MICH	53 54												
NUMBER OF SAMPLES			1	3	4	2	1					22	
MAXIMUM			22	37	58	22	50					40	
AVERAGE			22	27	29	21	50					22	
MINIMUM			22	18	16	21	50					2	
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	8	52	20	22	19	8	9	12	8	3	6
MAXIMUM		54	17	45	76	33	94	38	71	146	105	50	63
AVERAGE		21	10	12	19	14	25	14	21	51	39	29	30
MINIMUM		4	6	2	2	7	4	7	4	1	8	14	10
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				4	3	5	3	3	4	2	17		
AVERAGE				4	2	5	3	2	3	2	14		
MINIMUM				4	2	5	3	1	2	2	12		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		8	19	6	10	4	4	61	5	15	3		
AVERAGE		5	12	4	7	3	4	32	4	14	3		
MINIMUM		3	5	3	5	2	4	3	4	13	3		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		8	4	5	3	5	2		5	4	10	4	8
MAXIMUM		1	4	4	5	4	3		5	4	3	2	1
AVERAGE		8	6	7	5	10	4		14	6	16	6	8
MINIMUM		8	1	5	3	3	1		2	3	8	2	8
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	3	8	7	5	3	2	4	1	1	1	1
MAXIMUM		19	12	15	10	19	21	6	14	3	8	12	15
AVERAGE		10	8	8	6	7	11	4	9	3	8	12	15
MINIMUM		2	4	4		1	5	2	2	3	8	12	15

TABLE 15. LEAD—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		7	23		4	6	19	8	19	7	6	12	11
AVERAGE		6	14		4	5	13	6	17	7	6	10	9
MINIMUM		5	5		4	4	8	5	15	7	6	8	7
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	6	6	6	4	4	4	5	3
MAXIMUM		3	11	2	2	25	15	4	3	3	5	6	22
AVERAGE		2	6	2	2	6	6	2	2	2	4	2	11
MINIMUM		2	3	2	2	1	2	1	1	1	3	1	4
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	3	4	4	5	2	2	2	2	2	2	2
MAXIMUM		4	5	19	9	20	7	3	3	4	3	12	23
AVERAGE		4	3	7	5	7	7	2	3	2	3	8	13
MINIMUM		4	2	2	2	1	7	2	3	1	3	5	3
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES		1	7	9	5	8	14	7	3	6	6	9	7
MAXIMUM		13	57	69	16	71	130	130	100	170	52	14	69
AVERAGE		13	27	31	14	38	31	39	48	109	19	7	21
MINIMUM		13	7	6	12	11	2	7	10	2	7	3	4
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	3	4	2	3	3	2	3	3	4	2	3
MAXIMUM		28	13	9	2	8	5	10	14	20	27	28	84
AVERAGE		16	6	7	1	4	4	9	12	13	13	20	36
MINIMUM		9	1	4	1	2	3	8	11	9	5	13	11
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		11	8	39	9	17	12	18	24	22	31	34	27
AVERAGE		7	6	29	9	16	6	18	20	16	21	34	24
MINIMUM		4	5	20	9	16	3	18	16	10	12	34	22
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		21	42	43	33	14	19	16	14	14	15	47	37
AVERAGE		15	33	26	19	12	9	13	13	13	12	30	24
MINIMUM		11	18	10	5	11	1	10	13	13	10	14	17
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	4	4	8	4	7	1	3	3	3	1	3
MAXIMUM		21	57	19	32	11	8	9	8	20	49	1	18
AVERAGE		21	29	8	13	5	3	9	6	16	21	1	10
MINIMUM		21	6		1	1	1	9	3	10	3	1	2
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	4	6	2	2					
MAXIMUM			32	58	141	25	32	46					
AVERAGE			32	45	70	13	23	36					
MINIMUM			32	25	22		14	26					
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		3	3	1	2	3	2	1	1	1	2	3	2
AVERAGE		2	2		2	1	1				1	1	2
MINIMUM		1	1		2						1		2
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		4	6	3	6	5	5	7	2	4	6		
MAXIMUM		16	32	42	28	27	40	90	66	132	266		
AVERAGE		10	19	29	16	9	20	35	57	52	83		
MINIMUM		6	2	10	4	1	1	8	49	5	3		
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		2	2	2	3	2	3	4	5	4
MAXIMUM		30	51		10	13	25	12	7	51	60	122	193
AVERAGE		21	33		7	10	13	10	6	37	25	39	80
MINIMUM		11	25		5	7	2	8	6	14	5	8	15
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	4	2	5	5	5	5	6	4	7	6
MAXIMUM		32	18	9	6	6	9	12	7	16	18	43	44
AVERAGE		16	10	5	5	4	3	5	5	10	12	12	18
MINIMUM		8	3	1	5	3	1	2	4	6	7	3	4
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		17	6	17	5	13	24	14	19	14	15	21	6
AVERAGE		12	6	11	5	13	18	11	16	14	12	14	6
MINIMUM		7	6	6	5	13	13	7	12	14	9	6	6
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	2	9	4	3		2	7	5	21	20	
MAXIMUM		22	12	19	14	19		11	16	16	71	65	
AVERAGE		22	11	9	6	13		9	10	10	23	33	
MINIMUM		22	10	1	2	4		7	6	4	5	6	
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		10	5	8	4	12	5	8	5	16	12		
AVERAGE		9	4	8	2	7	3	6	3	8	12		
MINIMUM		8	3	8	1	4	2	4	2	4	12		

TABLE 15. LEAD—SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		5	3	7		1	4	5	1	9	2	2	2
AVERAGE		3	3	4		1	2	3		4	2	1	1
MINIMUM		1	3	1		1		1		1	2	1	1
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM		2		1	3	1	3	1		2	1	3	1
AVERAGE		1			1		3	1		1	1	2	1
MINIMUM		1			1		3	1		1	1	1	1
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2	1	5	3	3	1		2	1	1
MAXIMUM			2	9	3	7	45				2		2
AVERAGE			1	5	3	3	16				1		2
MINIMUM				1	3	1	1						2
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	4	2	5	3	4	4	4	4	3	2
MAXIMUM			6	13	18	12	5	17	2	5	5	5	11
AVERAGE			6	9	10	7	3	7		1	2	2	7
MINIMUM			6	3	2	5	2	1					4
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			2					1		7	2	4	
AVERAGE			2					1		4	1	4	
MINIMUM			2					1		1	1	4	
NONURBAN													
PT WORONZOF ALASKA	55 56												
NUMBER OF SAMPLES		1		1	1	2		1	2	1	1	1	1
MAXIMUM		11		3	1	5		1	2	1	3	2	10
AVERAGE		11		3	1	2		1	2	1	3	2	10
MINIMUM		11		3	1			1	1	1	3	2	10

TABLE 16. MAGNESIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
NEW YORK N Y	2	54 55	27		135	6					1	1	1	1	1
	3	54	6		80	44	1	1	30	30	38	54	54	78	78
		54 55	34		135	13				1	1	1	1	30	54
PHILADELPHIA PA		54	10		102	32	1	1	2	15	38	41	43	46	48
WASHINGTON DC		54 55	27		61	5					1	1	1	1	5
LOUISVILLE KY		54	7	9	120	67	9	9	34	58	61	61	88	118	118
		54	7	9	120	67	9	9	34	58	61	61	88	118	119
CHARLESTON W VA	1	54	4	2	46	25		2	2	15	15	15	38	38	48
TAMPA FLA	1	54	9		56	11		1	1	7	8	8	8	9	17
ATLANTA GA	1	54	6	1	57	18			1	1	1	17	17	38	38
CHICAGO ILL		54	35		65	5					1	1	1	1	30
		55	6		25	4					1	1	1	1	1
		54 55	41		65	5					1	1	1	1	27
DETROIT MICH	1	53 54	23	7	137	59	21	26	30	38	54	61	74	88	111
CINCINNATI OHIO	1	54 55	68		102	10				1	1	1	1	15	38
	2	54	16		83	26		1	1	2	18	24	27	61	69
	4	54	13		112	43		1	12	12	43	61	65	69	88
	5	54	18		118	47	1	11	12	36	43	48	69	83	99
		54 55	115		118	22			1	1	1	12	30	46	80
MINNEAPOLIS MINN	1	54	12		100	48	1	1	34	38	54	58	61	78	99
KANSAS CITY MO		54	11		32	16		1	1	8	22	23	23	24	30
NEW ORLEANS LA		54	4							1	1	1	1	1	1
FT WORTH TEXAS	1	54	4		420	119		1	1	1	1	1	61	61	458
HOUSTON TEXAS	1	54	18		85	19				1	1	1	27	48	58
BELLAIRE TEXAS	1	54	4		49	22		1	1	1	1	1	43	43	54
SALT LAKE CITY UTAH	2	54	4		52	16		1	1	1	1	1	11	11	54
ANCHORAGE ALASKA	1	54 55	21		448	25					1	1	1	1	24
LOS ANGELES CALIF		54	18		100	29		1	1	1	17	41	46	48	69
PASADENA CALIF	1	54 55	28		63	7				1	1	1	1	1	21
BERKELEY CALIF	1	54 55	34		60	4					1	1	1	1	17
SAN JOSE CALIF	1	54 55	34		100	7				1	1	1	1	1	21
PORTLAND OREGON	1	54	18		114	19				1	1	1	8	34	69
	2	54	15		71	8				1	1	1	1	1	48
	4	54	10								1	1	1	1	1
	5	54	10								1	1	1	1	1
		54	53		114	8					1	1	1	1	46

TABLE 16. MAGNESIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW JERSEY TOTAL	55	10								1	1	1	1	1
NEW YORK TOTAL	54 55	34		135	13				1	1	1	1	30	54
PENNSYLVANIA TOTAL	54	10		102	32	1	1	2	15	38	41	43	46	48
DIS COLUMBIA TOTAL	54 55	27		61	5					1	1	1	1	5
KENTUCKY TOTAL	54	7	9	120	67	9	9	34	58	61	61	88	118	118
WEST VIRGINA TOTAL	54	4	2	46	25		2	2	15	15	15	38	38	48
FLORIDA TOTAL	54	9		56	11		1	1	7	8	8	8	9	17
GEORGIA TOTAL	54	6	1	57	18			1	1	1	17	17	38	38
ILLINOIS TOTAL	54 55	41		65	5					1	1	1	1	27
MICHIGAN TOTAL	53 54	27		137	50	1	7	26	30	43	54	69	88	107
OHIO TOTAL	54 55	115		118	22			1	1	1	12	3	46	80
MINNESOTA TOTAL	54	12		100	48	1	1	34	38	54	58	61	78	99
MISSOURI TOTAL	54	11		32	16		1	1	8	22	23	23	24	30
LOUISIANA TOTAL	54	4							1	1	1	1	1	1
TEXAS TOTAL	54	29		420	34			1	1	1	24	43	54	59
COLORADO TOTAL	54	3								1	1	1	1	1
UTAH TOTAL	54	4		52	16		1	1	1	1	1	11	11	54
ALASKA TOTAL	54 55	21		448	25					1	1	1	1	24
CALIFORNIA TOTAL	54 55	115		100	10				1	1	1	1	16	46
OREGON TOTAL	54	53		114	8					1	1	1	1	46
MID ATLNTC TOTAL	54 55	54		135	14				1	1	1	1	35	48
MID EAST TOTAL	54 55	38		120	19				1	1	1	15	43	59
SOUTH EAST TOTAL	54	15		57	14		1	1	1	8	8	16	17	58
MID WEST TOTAL	53 55	183		137	22			1	1	1	12	28	47	78
GRT PLAINS TOTAL	54	23		100	33		1	9	22	24	32	38	58	78
GULF SOUTH TOTAL	54	33		420	30			1	1	1	1	38	51	59
ROCKY MNTN TOTAL	54	7		52	9				1	1	1	1	11	11
PAC COAST TOTAL	54 55	189		448	11				1	1	1	1	10	44
GRAND TOTAL	53 55	542		448	18				1	1	1	16	38	62

TABLE 16. MAGNESIUM—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
KANAWHA CO W VA	1	54	5		31	8			1	1	1	1	11	11	34
HILLSBOROUGH CO FLA	1	54	3	1	38	19		1	1	1	21	21	21	21	38
FULTON CO GEORGIA	1	54	5	1	111	31	1	1	10	10	11	11	27	27	111
HAMILTON COUNTY OHIO	1	54 55	30		100	11				1	1	1	1	14	58
TONKA BAY MINN	1	54	8		114	50	1	9	9	21	48	61	78	78	88
SALT LAKE CO UTAH	1	54	4		53	15		1	1	1	1	1	9	9	54
MULTNOMAH CNTY ORE	1	54	12		1						1	1	1	1	1
GRAND TOTAL		54 55	69		114	15				1	1	1	10	27	59

TABLE 16. MAGNESIUM—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
NEW YORK N Y	54 55												
NUMBER OF SAMPLES		2	3	4	2	4	3	3	1	4	3	3	2
MAXIMUM			80	135		37							
AVERAGE			50	55		25							
MINIMUM				1									
WASHINGTON DC	54 55												
NUMBER OF SAMPLES			3		4	3	4	3	4	4	2		
MAXIMUM					61	5	53						
AVERAGE					25	1	13						
MINIMUM													
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		2	4			2	9	5	3	4	6	3	3
MAXIMUM			25			44	65						
AVERAGE			6			36	13						
MINIMUM						29							
DETROIT MICH	53 54												
NUMBER OF SAMPLES			2	3	4	1	1					12	
MAXIMUM			59	137	80	25	26					116	
AVERAGE			46	107	42	25	26					60	
MINIMUM			33	77	7	25	26					21	
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		1	4	38	11	12	17	6	6	10	5	1	4
MAXIMUM			40	118	102	93	26						38
AVERAGE			10	43	30	36	1						22
MINIMUM													
HOUSTON TEXAS	54												
NUMBER OF SAMPLES		1	2	3	1	3	8						
MAXIMUM		59	49	85	26								
AVERAGE		59	47	55	26								
MINIMUM		59	45	22	26								
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	1	2	1	3	3	1	2	3	2		2
MAXIMUM				38	448	18							
AVERAGE				30	448	6							
MINIMUM				23	448								
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	3	6	2	2					
MAXIMUM			18	92	46	100							
AVERAGE			18	67	32	25							
MINIMUM			18	47	10								
PASADENA CALIF	54 55												
NUMBER OF SAMPLES		2	4	2	3	2	3	4	2	2	4		
MAXIMUM			10	63	46	20							
AVERAGE			2	39	29	10							
MINIMUM				16	1								
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		1	2	2	3	2	3	4	5	4
MAXIMUM			17		60	58							
AVERAGE			5		60	38							
MINIMUM					60	19							
SAN JOSE CALIF	54 55												
NUMBER OF SAMPLES		3	4	2	2	2	2	2	2	4	3	5	3
MAXIMUM				35	69	10							100
AVERAGE				28	43	5							33
MINIMUM				21	18								
PORTLAND OREGON	54												
NUMBER OF SAMPLES			1	6	3	3					20	20	
MAXIMUM			76	71	114								
AVERAGE			76	27	76								
MINIMUM			76		46								
SUBURBAN													
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	1	1	3	3	4	4	4	4	3	1
MAXIMUM				72	57	100	15	14					
AVERAGE				72	57	65	5	3					
MINIMUM				72	57	37							

TABLE 17. MANGANESE—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) $\times 10^{-2}$											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14		6	1			1	1	1	1	2	3	5
	1	56	22		7	1			1	1	1	1	2	4	5
	1	55 56	36		7	1			1	1	1	1	2	3	5
BOSTON MASS	1	55	23		3						1	1	1	1	2
EVERETT MASS	1	55	26		8	2			1	1	1	2	2	4	5
ELIZABETH N J	1	55 56	21		8						1	1	1	1	1
PAULSBORO N J	1	55 56	25		13						1	1	1	1	3
CAMDEN N J	1	55 56	21		20	3			1	1	1	2	2	5	7
PERTH AMBOY N J	1	55 56	23		8						1	1	1	1	5
TRENTON N J	1	55 56	17		10	1				1	1	1	1	2	3
JERSEY CITY N J	1	55 56	23		20	1					1	1	1	1	6
NEW YORK N Y	2	54 56	50		31	8		1	1	4	8	10	12	15	21
	3	54 55	23		16	1				1	1	1	1	2	5
		54 56	73		31	6			1	1	3	5	9	14	17
PHILADELPHIA PA	1	54	6		76	21	1	1	6	6	11	12	12	21	21
	1	55	90		18	1				1	1	1	2	3	4
	1	56	11		5	2		1	1	1	2	2	2	3	4
	1	54 56	107		76	2			1	1	1	1	2	3	5
	4	56	11		14	2			1	1	2	2	3	3	6
	5	56	9		5	1			1	1	1	1	1	3	5
	6	56	11		7	1				1	1	1	2	2	3
	7	56	11		8	2		1	1	1	2	2	2	5	6
		54	10		386	53	1	1	6	10	11	12	13	21	78
		55	90		18	1				1	1	1	2	3	4
		56	53		14	2			1	1	1	2	2	3	5
		54 56	153		386	5			1	1	1	1	2	3	5
ALTOONA PA	1	56	13		3						1	1	1	1	2
BRISTOL PA	1	55 56	18		9						1	1	1	1	1
CHESTER PA	1	55 56	18		8	2		1	1	1	1	2	3	3	4
ERIE PA	1	56	25		9	3		1	1	2	3	3	5	5	7
PITTSBURGH PA	1	56	21	1	70	16	2	5	6	10	10	11	20	21	30
WILLIAMSPORT PA	1	55 56	23		10	4		1	2	3	4	6	7	8	10
WASHINGTON DC	1	54	24		16	5		1	2	4	4	5	8	10	13
	2	55 56	19		15	4	1	1	2	2	3	4	5	6	14
		54 56	43		16	5		1	2	3	4	5	6	8	13
LOUISVILLE KY	1	54	22		21	6	1	2	3	3	5	5	6	10	12
	1	55	21	2	12	5	2	2	3	3	4	5	5	6	9
	1	54 55	43		21	5	1	2	3	3	4	5	5	7	11
	2	54	13	2	9	4	1	2	2	3	4	4	4	5	8
	2	55	10	1	15	4	1	1	2	2	2	4	4	8	9
	2	54 55	23	1	15	4	1	2	2	2	3	4	4	7	9
	3	54	5		14	5	1	1	2	2	2	2	9	9	15
		54	40		21	5	1	2	2	3	4	5	6	8	11
		55	31	1	15	4	1	2	2	3	4	5	5	7	9
		54 55	71		21	5	1	2	2	3	4	5	5	8	10
BALTIMORE MD	1	57	18	4	33	9	4	5	5	5	6	8	9	11	16
CHARLESTON W VA		54 55	26		120	32	1	1	6	8	17	29	43	69	88
TAMPA FLA	1	54	30		16	1				1	1	1	1	2	3
ATLANTA GA	1	54 56	25		30	9	1	2	3	4	7	8	14	15	24
CHATTANOOGA TENN	3	55	14		76	13		1	1	2	3	5	19	20	27
	4	55 56	18		300	47	2	3	8	10	11	48	58	61	88
		55 56	32		300	32	1	1	3	8	11	19	21	58	78
CHICAGO ILL	1	54 55	30		20	5		1	2	3	4	5	6	7	11
	2	54	30	4	53	27	7	12	21	26	28	29	34	38	46
	2	55	26		30	13	3	4	5	7	10	19	20	21	27
	2	54 55	56		53	20	4	6	9	14	20	26	28	30	38
	4	55	29		60	14	1	1	4	5	8	9	11	21	43
		54	36		53	23	6	8	12	15	26	28	30	37	43
		55	82		60	11	1	2	3	4	6	8	10	20	27
		54 55	118		60	14	1	3	4	6	9	12	20	27	35

TABLE 17. MANGANESE—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST ST LOUIS ILL	1	55 56	15		20	8	4	6	7	7	8	9	10	10	11
	2	55 56	14		10	5	1	2	2	5	5	6	6	7	8
		55 56	29		20	6	1	4	5	6	6	7	8	9	10
EAST CHICAGO IND	1	55 56	18		70	23	1	8	8	10	20	21	39	41	43
	2	55 56	26	2	120	19	3	5	8	12	14	17	20	29	30
	3	55 56	21		24	10	2	3	7	7	9	10	15	17	20
	4	55 56	20		35	10	1	2	4	5	6	8	11	20	24
		55 56	85		120	16	2	4	7	8	10	15	20	23	36
DETROIT MICH	1	53 54	31	8	264	69	15	21	30	40	46	51	78	88	179
CINCINNATI OHIO	1	54	68		114	17	3	5	6	8	11	16	21	27	77
	1	55	27		929	48	1	2	4	6	7	9	18	21	58
	1	54 55	95		929	26	2	4	6	7	10	14	20	27	43
	2	54	19		129	27	2	6	11	12	16	16	29	34	69
	4	54	20	1	183	23	1	5	6	9	12	19	21	29	30
	5	54	24	3	232	35	4	8	14	23	24	25	27	36	88
		54	131		232	23	3	5	7	10	14	20	25	29	43
		55	27		929	48	1	2	4	6	7	9	18	21	58
		54 55	158		929	27	2	5	6	9	12	18	24	29	46
YOUNGSTOWN OHIO	1	57	12	9	90	42	9	13	18	19	38	48	54	69	88
MILWAUKEE WIS	1	57	19		25	5	1	2	3	3	4	4	5	6	7
MINNEAPOLIS MINN	1	54	16	2	24	7	3	3	4	6	6	7	7	10	11
	1	55	17	1	8	4	1	2	2	3	3	4	5	6	7
	1	54 55	33	1	24	5	2	2	3	3	5	6	6	7	10
KANSAS CITY MO	2	54 56	24		41	5	1	2	2	3	3	4	4	5	10
	3	54	5		32	10	1	1	1	1	6	6	13	13	34
	4	55 56	9		8	2			1	1	1	1	2	3	5
		54	11		41	9		1	1	1	5	6	6	13	34
		55	19		10	3		1	2	2	3	3	4	5	8
		56	8		6	2	1	1	1	2	3	3	4	4	5
		54 56	38		41	5		1	1	2	3	4	5	6	10
ST LOUIS MO	1	55 56	23		30	5	1	1	2	2	3	5	6	7	10
NEW ORLEANS LA	1	54 55	26		10	1				1	1	1	1	2	3
	2	54 55	24		9	2		1	1	1	2	2	3	4	5
		54 55	50		10	1			1	1	1	1	2	3	4
FT WORTH TEXAS	1	54	16		283	19			1	1	1	2	2	4	5
	1	55	14		4					1	1	1	1	1	4
	1	54 55	30		283	10			1	1	1	1	2	3	4
LAKEWORTH TEXAS	1	54	5	2	19	10	2	2	5	5	13	13	15	15	19
HOUSTON TEXAS	1	54	25		140	13		1	1	1	2	2	5	11	30
	1	55	55		90	12	1	2	2	3	4	5	17	20	34
	1	54 55	80		140	12	1	1	2	2	3	4	10	19	30
BELLAIRE TEXAS	1	54 55	34		57	6		1	1	2	2	3	4	4	20
DENVER COL	1	54 55	23		20	5	1	2	2	3	4	4	5	7	10
		54 55	26		20	4	1	1	2	3	4	4	5	8	9
SALT LAKE CITY UTAH	2	54 55	31		8	3	1	1	2	2	3	3	4	5	6
ANCHORAGE ALASKA	1	54 55	37		374	23		1	1	3	12	15	18	24	34
LOS ANGELES CALIF		54	18		186	27	1	9	10	14	15	19	21	30	43
SAN FRANCISCO CALIF	1	55	15								1	1	1	1	1
	1	56	15		3	1			1	1	1	1	1	2	3
	1	55 56	30		3						1	1	1	1	2
PASADENA CALIF	1	54	20		32	11		1	4	8	9	12	15	17	29
	1	55	21		19	2				1	1	1	2	4	9
	1	54 56	45		32	6			1	1	1	4	9	12	19
BERKELEY CALIF	1	54 55	34	1	35	10	1	4	6	9	11	11	13	14	16
SAN JOSE CALIF	1	54	26		17	9	1	2	6	8	10	11	12	13	15
	1	55	12		11	5			1	1	6	7	7	10	10
	1	56	20		7	1			1	1	1	1	2	2	4
	1	54 56	58		17	5		1	1	2	4	6	9	11	13

TABLE 17. MANGANESE—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SAN LEANDRO CALIF	1	55 56	30		10	2		1	1	2	2	2	3	4	6
PORTLAND OREGON	1	54	20		90	34	4	11	19	27	34	40	43	51	58
	1	55	19		40	15	1	6	9	10	11	19	20	21	29
	1	54 55	39		90	25	4	7	10	19	20	27	32	41	51
	2	54	15	2	89	40	11	19	24	27	43	48	56	58	61
	3	54	10	10	57	32	10	11	15	21	27	38	43	48	58
	4	54	10	6	33	20	6	8	11	19	20	20	21	30	32
		54	55		90	32	8	11	19	23	31	38	43	52	58
		55	19		40	15	1	6	9	10	11	19	20	21	29
		54 55	74		90	28	6	10	14	20	23	29	39	45	57
SEATTLE WASH	1	57	20	2	24	7	2	3	4	4	5	6	7	12	17

TABLE 17. MANGANESE—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻²											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		7	1			1	1	1	1	2	3	5
MASSACHUSETS TOTAL	55	49		8	1				1	1	1	1	2	4
NEW YORK TOTAL	54 56	73		31	6			1	1	3	5	9	14	17
PENNSYLVANIA TOTAL	54 56	271		386	5			1	1	1	2	3	5	9
DIS COLUMBIA TOTAL	54 56	43		16	5		1	2	3	4	5	6	8	13
KENTUCKY TOTAL	54 55	71		21	5	1	2	2	3	4	5	5	8	10
MARYLAND TOTAL	57	18	4	33	9	4	5	5	5	6	8	9	11	16
WEST VIRGINA TOTAL	54 55	26		120	32	1	1	6	8	17	29	43	69	88
FLORIDA TOTAL	54 55	34		16	1				1	1	1	2	2	5
GEORGIA TOTAL	54 56	25		30	9	1	2	3	4	7	8	14	15	24
TENNESSEE TOTAL	55 56	32		300	32	1	1	3	8	11	19	21	58	78
ILLINOIS TOTAL	54 56	147		60	13	1	3	5	6	8	10	19	25	30
INDIANA TOTAL	55 56	85		120	16	2	4	7	8	10	15	20	23	36
MICHIGAN TOTAL	53 54	36		264	60	6	11	21	30	41	47	54	85	125
OHIO TOTAL	54 57	170		929	28	3	5	7	10	14	19	25	33	53
WISCONSIN TOTAL	57	19		25	5	1	2	3	3	4	4	5	6	7
MINNESOTA TOTAL	54 55	33	1	24	5	2	2	3	3	5	6	6	7	10
MISSOURI TOTAL	54 56	61		41	5		1	2	2	3	4	5	6	10
LOUISIANA TOTAL	54 55	50		10	1			1	1	1	1	2	3	4
TEXAS TOTAL	54 55	149		283	10		1	1	2	2	3	4	13	24
COLORADO TOTAL	54 55	26		20	4	1	1	2	3	4	4	5	8	9
UTAH TOTAL	54 55	31		8	3	1	1	2	2	3	3	4	5	6
ALASKA TOTAL	54 55	37		374	23		1	1	3	12	15	18	24	34
CALIFORNIA TOTAL	54 56	216		186	7		1	1	1	2	5	9	12	15
OREGON TOTAL	54 55	74		90	28	6	10	14	20	23	29	39	45	57
WASHINGTON TOTAL	57	20	2	24	7	2	3	4	4	5	6	7	12	17
NEW ENGLND TOTAL	55 56	85		8	1				1	1	1	1	2	5
MID ATLNTC TOTAL	54 56	474		386	4			1	1	1	1	3	5	10
MID EAST TOTAL	54 57	158		120	10	1	2	2	4	5	6	8	11	17
SOUTH EAST TOTAL	54 56	91		300	14		1	1	2	3	5	10	19	30
MID WEST TOTAL	53 57	457		929	22	2	4	6	8	10	16	21	29	45
GRT PLAINS TOTAL	54 56	94		41	5	1	1	2	3	3	4	6	7	10
GULF SOUTH TOTAL	54 55	199		283	8		1	1	1	2	3	4	8	19
ROCKY MNTN TOTAL	54 55	57		20	4	1	1	2	2	3	4	4	5	7
PAC COAST TOTAL	54 57	347		374	13		1	1	3	6	10	13	20	33
GRAND TOTAL	53 57	1962		929	11		1	1	2	4	5	9	15	27

TABLE 17. MANGANESE—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		10	1				1	1	1	1	2	3
LAKEHURST N J	1	55 56	19		9	1				1	1	1	1	1	2
KANAWHA CO W VA	1	54 55	22		50	13	1	1	3	6	9	10	17	29	34
FULTON CO GEORGIA	1	54	5	1	36	16	1	1	1	1	9	9	34	34	38
HAMILTON COUNTY OHIO	1	54 55	36		38	7	2	3	4	5	6	7	8	10	11
TONKA BAY MINN	1	54	9		28	5		1	1	1	4	4	4	5	8
DENVER COUNTY COLO	1	54 55	10		6	3	1	1	2	2	3	3	4	4	4
SALT LAKE CO UTAH	1	54	4		8	2		1	1	1	1	1	3	3	8
MULTNOMAH CNTY ORE	1	54	12	2	12	7	2	4	5	5	6	6	9	10	11
GRAND TOTAL		54 56	140		50	6		1	1	2	3	5	7	9	13
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		2	1						2	2	2	2

TABLE 17. MANGANESE—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻²

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM				1	3	5		3	7		4	7	5
AVERAGE						4		1	3		1	3	2
MINIMUM						2							
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		2			1		2			3	2		
AVERAGE		2			1		1			3	1		
MINIMUM		2			1					3			
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		1	5	2	1	6	5	4	1	1	2	4	8
AVERAGE			2	1	1	6	2	1			2	4	5
MINIMUM					1	6					2	4	2
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM				8	1								
AVERAGE				2									
MINIMUM													
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		3		13	7								
AVERAGE		1		4	1								
MINIMUM													
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		5	7	18	20		2		2	6			2
AVERAGE		3	3	6	10		2		1	2			1
MINIMUM		2					2		1				
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM				4	8							5	
AVERAGE				1	2							1	
MINIMUM													
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM					10			1			3	2	4
AVERAGE					10						3	2	2
MINIMUM					10						3	2	
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM			6	14	20				1				
AVERAGE			3	3	5								
MINIMUM													
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		4	6	3	7	5	10	7	5	6	6	7	7
MAXIMUM		16	16	24	9	11	17	16	10	29	31	14	14
AVERAGE		9	5	13	2	3	4	7	2	13	14	5	3
MINIMUM		5											
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		19	16	14	15	19	12	13	10	10	8	8	9
MAXIMUM		386	21	5	11	14	8	3	5	5	3	3	5
AVERAGE		27	2	1	2	2	3		2	1			1
MINIMUM													
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM					2	1			3		1	1	
AVERAGE					1				3			1	
MINIMUM									3			1	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			1							6	1	9	
AVERAGE			1							1		4	
MINIMUM			1										
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			2				4	8	3	6			3
AVERAGE			2				2	4	1	3			3
MINIMUM			2							2			3
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		9	5	2	3	2	5	2		7	8	6	5
AVERAGE		5	5	1	1	1	5	2		4	4	4	3
MINIMUM		2	5				5	2		1		3	1
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		20	20	70			20	2		20	30	50	10
AVERAGE		11	9	33			12	1		15	20	30	10
MINIMUM		5	2	10			6	1		10	10	10	10

TABLE 17. MANGANESE—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-2}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			10	7	10	9		7	6	10	3	8	1
AVERAGE			5	7	6	5		7	6	7	2	4	
MINIMUM			1	7	3	2		7	6	4	1	2	
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	5	1	3	6	6	4	7	6	3	1	
MAXIMUM		6	15	4	2	13	6	10	13	16	12		
AVERAGE		6	10	4	1	4	3	5	4	7	7		
MINIMUM		6		4				3		2	3		
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	6	4	4	13	13	12	6	1	6
MAXIMUM		2	9	7	14	21	9	12	15	10	9	3	8
AVERAGE		2	5	7	6	10	6	3	5	4	5	3	3
MINIMUM		2	2	7			2		2	2	2	3	
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		8	8	17	33	13	6	6	10	6			
AVERAGE		8	6	13	17	13	5	5	7	6			
MINIMUM		8	5	9	4	13	4	5	5	6			
CHARLESTON W VA	54 55												
NUMBER OF SAMPLES			1	3	4	5	3	2	1	1	3	2	1
MAXIMUM			30	54	82	20	60	40	90	90	70		120
AVERAGE			30	25	39	10	23	35	90	90	26		120
MINIMUM			30	6				30	90	90	2		120
TAMPA FLA	54 55												
NUMBER OF SAMPLES		2	2	3	5	5	2	2	2	3	1	2	1
MAXIMUM		1	2	16	3	1	5		4	3	2		
AVERAGE			1	6	1		2		3	1	2		
MINIMUM			1						2		2		
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	3	6	4	3	1	3	1		1	1	1
MAXIMUM		30	14	28	13	15	3	5	3		20	5	4
AVERAGE		30	10	15	6	8	3	2	3		20	5	4
MINIMUM		30	8	3		2	3		3		20	5	4
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			50	20	19	76		45	10	120	80	20	300
AVERAGE			16	12	9	68		45	6	54	32	7	151
MINIMUM				8		60		45	2	1			3
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	11	20	14	9	8	15	13	8
MAXIMUM		21	30	10	20	60	40	40	27	60	60	53	48
AVERAGE		10	22	4	13	13	12	11	9	27	19	13	18
MINIMUM			7							9	4		5
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		8	6	20	9	10	10	10	10	10	1	8	7
AVERAGE		4	3	13	8	7	8	10	8	6	1	6	5
MINIMUM				6	7	5	7	10	6	2	1	5	4
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	18	7	4	6	10	5	7	5	8	8
MAXIMUM		70	20	60	35	120	31	38	15	40	40	16	16
AVERAGE		17	9	21	17	49	17	18	5	19	20	6	6
MINIMUM		4		4	7	15	2	2		5	8		
DETROIT MICH	53 54												
NUMBER OF SAMPLES			1	3	4	2	1					20	
MAXIMUM			54	264	42	27	72					252	
AVERAGE			54	124	32	21	72					73	
MINIMUM			54	32	22	16	72					8	
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	5	44	20	22	19	8	9	12	7	3	6
MAXIMUM		18	21	183	114	232	54	17	19	50	62	929	40
AVERAGE		6	13	28	26	24	19	7	7	15	17	341	13
MINIMUM			3	1	1		4		1			36	2
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				16	69	18	9	47	66	13	90		
AVERAGE				16	44	18	9	41	57	13	85		
MINIMUM				16	19	18	9	35	49	13	80		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		4	4	25	12	5	2	7	7	7	3		
AVERAGE		3	2	12	7	4	2	6	4	5	3		
MINIMUM		3			4	3	2	6	2	3	3		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	4	4	5	4	3		5	4	3		
MAXIMUM		8	11	24	8	12	7		7	6	4		
AVERAGE		8	7	10	5	6	4		4	4	3		
MINIMUM		8	5	3	3	2	3		1	3	1		

TABLE 17. MANGANESE—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-1}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	2	7	7	5	3	2	4	1	1	1	1
MAXIMUM		4	6	41	32	6	5	3	10	8		3	3
AVERAGE		1	5	10	6	2	3	2	6	8		3	3
MINIMUM			5	2			2	1		8		3	3
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		8	8		3	5	10	5	30	4	2	6	10
AVERAGE		5	4		2	2	6	2	13	4	2	4	8
MINIMUM		2			1		3		3	4	2	3	6
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	6	6	6	4	4	4	5	3
MAXIMUM			2			10	9	4	4	9	4	4	3
AVERAGE						2	3	1	2	4	2	2	1
MINIMUM									1		1		
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	3	3	4	4	2	2	2	2	2	2	2
MAXIMUM			5	283	6	4	4		2	2	2		3
AVERAGE			2	94	2	1	4		1	1	1		1
MINIMUM							4						
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES		1	7	8	5	8	14	7	3	6	5	9	7
MAXIMUM		140	84	29	9	18	36	18	19	90	4	5	30
AVERAGE		140	24	13	4	4	8	6	9	38	2.	2	13
MINIMUM		140	2	2						2	2	1	1
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	4	2	3	3	2	3	3	4	2	3
MAXIMUM		16	3	57		3	8	2	2	4	7	4	23
AVERAGE		7	2	25		1	2	2	2	3	4	3	9
MINIMUM		3	1	4				2	2	2	2	2	2
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		2	2	10	8	5	8	10	4	4	20	7	9
AVERAGE		2	2	7	6	5	2	6	3	4	12	7	6
MINIMUM		2	2	5	5	5		3	2	4	4	7	3
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		3	6	6	6	6	5	4	4	3	3	5	8
AVERAGE		2	3	4	4	4	2	2	3	2	1	4	5
MINIMUM				3	3	3			3	2		3	4
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	2	2	7	4	7	1	3	3	3	1	3
MAXIMUM		7			374	48	53	34	17	23	18		3
AVERAGE		7			72	23	20	34	6	8	10		1
MINIMUM		7				9	3	34					
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	3	4	6	2	2					
MAXIMUM			62	186	31	19	20	21					
AVERAGE			62	79	20	7	18	18					
MINIMUM			62	11	10		17	15					
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	1	3	2	5	1
MAXIMUM			3		2	2	2	3					
AVERAGE			2		2	1	1						
MINIMUM			1		2	1	1						
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		4	5	3	4	5	5	7	2	4	6		
MAXIMUM		9	19	9	4	5	1	12	16	27	32		
AVERAGE		4	6	4	1	2		6	12	11	17		
MINIMUM				1					9	1			
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		1	2	2	3	2	3	4	5	4
MAXIMUM		9	15		1	2	13	20	14	16	17	12	35
AVERAGE		6	10		1	1	7	15	13	14	12	8	12
MINIMUM		5	1		1	1	2	11	12	13	10	4	1
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	3	2	5	5	5	5	6	4	7	6
MAXIMUM		10	11	2	5	2	13	16	13	17	14	13	16
AVERAGE		6	6		2	1	3	6	6	10	9	6	4
MINIMUM		1							2	4			
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		2	2	2		2	10	6	6	2	5	7	
AVERAGE			2	1		2	7	3	4	2	3	2	
MINIMUM			2	1		2	4	1	2	2	2		
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	2	9	4	3		2	7	5	21	20	
MAXIMUM		20	47	57	11	41		20	30	30	60	90	
AVERAGE		20	31	24	4	23		15	20	12	33	39	
MINIMUM		20	15			11		10	10	6	6	7	
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		24	5	7	5	13	12	21	5	16	6		
AVERAGE		15	4	7	3	8	8	13	3	7	6		
MINIMUM		7	3	7	2	5	4	5	2	3	6		

TABLE 17. MANGANESE—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-2}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		1		5			2		2	1	2	3	10
AVERAGE				3			1		1		2	1	4
MINIMUM				2							2		
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM				9	9							2	
AVERAGE				3	3							1	
MINIMUM													
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2		5	3	3	1		2	1	1
MAXIMUM		9	40	50		34	17	7	10		30		2
AVERAGE		9	26	40		11	8	4	10		15		2
MINIMUM		9	20	30		2		2	10				2
FULTON CO GEORGIA	54												
NUMBER OF SAMPLES			2	1	1	1							
MAXIMUM			36	33	1	1							
AVERAGE			22	33	1	1							
MINIMUM			9	33	1	1							
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	4	2	5	3	4	4	4	4	3	2
MAXIMUM			11	16	38	8	11	11	8	13	8	8	4
AVERAGE			11	8	20	4	7	8	6	9	6	7	2
MINIMUM			11	2	2		4	3	4	6	3	6	1
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			1		4			4		4	6	4	2
AVERAGE			1		4			4		3	5	4	2
MINIMUM			1		4			4		2	4	4	2

TABLE 18. NICKEL—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	10	2800	229	10	11	19	22	29	31	48	52	62
	1	56	22	9	100	39	18	19	20	21	22	31	42	62	93
	1	55 56	36	9	2800	113	11	19	20	21	22	39	44	55	88
BOSTON MASS	1	55	23	5	300	42	10	11	20	22	29	31	41	44	62
EVERETT MASS	1	55	26	3	80	26	4	7	10	11	20	27	29	44	62
ELIZABETH N J	1	55 56	20	3	59	19	6	9	10	11	15	17	24	29	37
PAULSBORO N J	1	55 56	23	3	51	17	4	5	8	10	14	16	20	24	37
CAMDEN N J	1	55 56	19	7	95	25	9	10	13	17	22	23	26	29	31
PERTH AMBOY N J	1	55 56	21	3	53	19	5	6	9	12	16	19	21	26	44
TRENTON N J	1	55 56	16		45	16	3	4	7	9	11	16	20	31	37
JERSEY CITY N J	1	55 56	21	9	150	43	18	21	26	29	37	41	44	52	74
NEW YORK N Y	2	55 56	20	1	210	54	18	22	31	37	44	56	60	74	96
	3	54 55	18	29	137	78	31	55	57	62	81	91	96	99	104
		54 56	38	1	210	65	22	31	41	54	59	68	88	94	102
PHILADELPHIA PA	1	55	94	5	120	27	9	12	15	18	20	23	29	38	50
	1	56	11	7	69	23	7	9	11	15	18	22	31	34	37
	1	55 56	105	5	120	26	9	12	15	17	20	23	29	37	50
	4	56	11	5	130	30	5	13	16	18	20	21	22	31	52
	5	56	9	7	20	13	7	9	11	12	13	13	16	18	20
	6	56	11	7	98	37	7	15	16	18	37	47	49	52	62
	7	56	11	1	83	22	1	6	8	9	11	16	29	31	52
		55	94	5	120	27	9	14	15	18	20	23	29	38	50
		56	53	1	130	26	7	10	12	15	18	20	28	35	52
		55 56	147	1	130	26	8	11	14	16	19	22	28	38	50
ALTOONA PA	1	56	13		10	6	1	3	3	5	7	7	8	8	10
BRISTOL PA	1	55 56	18		17	7	1	1	2	3	4	9	12	13	17
CHESTER PA	1	55 56	18		98	16	5	6	7	8	9	10	11	13	18
ERIE PA	1	56	25		20	5	1	2	2	3	4	4	5	6	11
PITTSBURGH PA	1	56	21		100	14	1	4	5	8	10	10	11	19	22
WILLIAMSPORT PA	1	55 56	23		200	16	1	5	7	7	8	9	10	11	21
WASHINGTON DC	2	55 56	17	8	40	24	10	11	19	20	21	22	29	31	39
LOUISVILLE KY	1	54	17	3	32	10	3	3	5	6	7	7	13	19	21
	1	55	21		13	5	1	2	3	3	6	7	8	9	10
	1	54 55	38		32	7	2	3	4	5	6	7	9	10	16
	2	54	13		80	8		1	2	2	3	3	3	4	9
	2	55	10	2	86	21	2	4	4	10	11	18	22	29	31
	2	54 55	23		86	14	1	4	4	3	4	5	10	18	31
		54	31		80	9	1	4	2	3	5	6	7	13	21
		55	31		86	10	1	2	3	4	7	9	10	11	22
		54 55	62		86	10	1	2	3	3	5	7	9	12	21
BALTIMORE MD	1	57	18	17	84	41	19	22	28	31	35	44	55	59	74
CHARLESTON W VA	4	55	16		100	12	2	3	3	5	7	8	8	10	11
TAMPA FLA	1	55	21	2	20	6	2	3	3	4	5	5	6	8	19
ATLANTA GA	1	55 56	16	3	60	10	3	4	5	6	6	7	8	10	11
CHATTANOOGA TENN	3	55	14		18	4	1	2	2	3	3	4	5	5	6
	4	55 56	18		30	6	2	3	3	4	4	5	7	8	9
		55 56	32		30	5	1	2	3	3	4	4	5	7	9
CHICAGO ILL	1	55	28	3	100	17	4	7	7	8	9	11	20	22	31
	2	55	20	4	100	27	6	9	11	19	20	21	29	44	52
	4	55	29		40	13	4	6	7	9	10	10	11	22	29
		55	77		100	18	4	7	8	9	10	19	21	28	39
EAST ST LOUIS ILL	1	55 56	15	5	200	31	6	9	10	10	11	19	22	31	62
	2	55 56	14	2	50	8	2	3	3	4	5	6	6	8	9
		55 56	29	2	200	20	3	4	5	8	9	9	11	21	48

TABLE 18. NICKEL—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^3											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55 56	19	3	30	15	6	8	10	10	11	11	20	22	29
	2	55 56	26	2	60	17	4	5	6	8	11	19	22	29	31
	3	55 56	21	3	100	26	4	7	10	11	20	21	22	48	62
	4	55 56	20	1	40	12	3	4	5	5	6	7	11	22	29
		55 56	86	1	100	18	4	5	7	9	10	19	21	28	31
CINCINNATI OHIO	1	55	23		99	13	4	5	6	9	10	10	10	11	20
YOUNGSTOWN OHIO	1	57	12	16	53	35	16	22	26	31	34	37	44	49	52
MILWAUKEE WIS	1	57	19	11	70	29	15	17	19	20	22	24	31	41	57
MINNEAPOLIS MINN	1	54 55	21	2	60	8	2	3	4	4	5	5	6	10	11
KANSAS CITY MO	2	55 56	18	4	30	10	5	6	6	7	9	10	11	13	18
	4	55 56	9		8	3		1	1	1	4	4	4	5	5
		55 56	27		30	8	1	3	4	5	7	8	10	11	17
ST LOUIS MO	1	55 56	23	4	50	13	4	7	7	8	9	10	11	20	22
NEW ORLEANS LA	1	54 55	24		7	2		1	1	2	2	3	3	4	6
	2	54 55	22		7	2		1	1	1	2	2	2	3	4
		54 55	46		7	2		1	1	2	2	2	3	3	5
FT WORTH TEXAS	1	54 55	24	1	10	3	1	1	2	2	3	3	4	5	7
HOUSTON TEXAS	1	54 55	64		60	3		1	1	2	2	2	3	4	6
BELLAIRE TEXAS	1	54	17		5	1			1	1	1	1	2	2	3
	1	55	14		10	2			1	1	1	2	3	4	6
	1	54 55	31		10	1			1	1	1	2	2	3	5
DENVER COL	1	54 55	23		20	4		1	1	1	2	3	5	6	11
SALT LAKE CITY UTAH	2	54 55	26	1	30	11	5	6	6	7	9	10	11	19	22
ANCHORAGE ALASKA	1	54 55	13		120	17	1	4	5	7	10	10	11	11	22
SAN FRANCISCO CALIF	1	55 56	32		30	8	2	2	3	4	5	6	8	11	21
PASADENA CALIF	1	55 56	20	3	100	30	5	10	11	16	20	22	28	31	43
SAN JOSE CALIF	1	55 56	25	4	40	16	5	6	9	10	11	19	21	22	37
SAN LEANDRO CALIF	1	55 56	30	5	90	17	7	9	10	10	11	18	20	21	29
PORTLAND OREGON	1	54 55	20	20	100	65	28	31	44	52	62	74	88	93	99
SEATTLE WASH	1	57	20	22	180	78	23	26	52	66	74	83	96	110	123

TABLE 18. NICKEL—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55 56	19	3	30	15	6	8	10	10	11	11	20	22	29
	2	55 56	26	2	60	17	4	5	6	8	11	19	22	29	31
	3	55 56	21	3	100	26	4	7	10	11	20	21	22	48	62
	4	55 56	20	1	40	12	3	4	5	5	6	7	11	22	29
		55 56	86	1	100	18	4	5	7	9	10	19	21	28	31
CINCINNATI OHIO	1	55	23		99	13	4	5	6	9	10	10	10	11	20
YOUNGSTOWN OHIO	1	57	12	16	53	35	16	22	26	31	34	37	44	49	52
MILWAUKEE WIS	1	57	19	11	70	29	15	17	19	20	22	24	31	41	57
MINNEAPOLIS MINN	1	54 55	21	2	60	8	2	3	4	4	5	5	6	10	11
KANSAS CITY MO	2	55 56	18	4	30	10	5	6	6	7	9	10	11	13	18
	4	55 56	9		8	3		1	1	1	4	4	4	5	5
		55 56	27		30	8	1	3	4	5	7	8	10	11	17
ST LOUIS MO	1	55 56	23	4	50	13	4	7	7	8	9	10	11	20	22
NEW ORLEANS LA	1	54 55	24		7	2		1	1	2	2	3	3	4	6
	2	54 55	22		7	2		1	1	1	2	2	2	3	4
		54 55	46		7	2		1	1	2	2	2	3	3	5
FT WORTH TEXAS	1	54 55	24	1	10	3	1	1	2	2	3	3	4	5	7
HOUSTON TEXAS	1	54 55	64		60	3		1	1	2	2	2	3	4	6
BELLAIRE TEXAS	1	54	17		5	1			1	1	1	1	2	2	3
	1	55	14		10	2			1	1	1	2	3	4	6
	1	54 55	31		10	1			1	1	1	2	2	3	5
DENVER COL	1	54 55	23		20	4		1	1	1	2	3	5	6	11
SALT LAKE CITY UTAH	2	54 55	26	1	30	11	5	6	6	7	9	10	11	19	22
ANCHORAGE ALASKA	1	54 55	13		120	17	1	4	5	7	10	10	11	11	22
SAN FRANCISCO CALIF	1	55 56	32		30	8	2	2	3	4	5	6	8	11	21
PASADENA CALIF	1	55 56	20	3	100	30	5	10	11	16	20	22	28	31	93
SAN JOSE CALIF	1	55 56	25	4	40	16	5	6	9	10	11	19	21	22	37
SAN LEANDRO CALIF	1	55 56	30	5	90	17	7	9	10	10	11	18	20	21	29
PORTLAND OREGON	1	54 55	20	20	100	65	28	31	44	52	62	74	88	93	99
SEATTLE WASH	1	57	20	22	180	78	23	26	52	66	74	83	96	110	123

TABLE 18. NICKEL—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36	9	2800	113	11	19	20	21	22	39	44	55	88
MASSACHUSETS TOTAL	55	49	3	300	34	6	10	11	20	27	29	31	44	62
NEW JERSEY TOTAL	55 56	120		150	23	5	9	10	14	18	22	27	35	46
NEW YORK TOTAL	54 56	38	1	210	65	22	31	41	54	59	68	88	94	102
PENNSYLVANIA TOTAL	55 56	265		200	19	3	5	8	10	12	16	20	26	44
DIS COLUMBIA TOTAL	55 56	17	8	40	24	10	11	19	20	21	22	29	31	39
KENTUCKY TOTAL	54 55	62		86	10	1	2	3	3	5	7	9	12	21
MARYLAND TOTAL	57	18	17	84	41	19	22	28	31	35	44	55	59	74
WEST VIRGINA TOTAL	55	16		100	12	2	3	3	5	7	8	8	10	11
FLORIDA TOTAL	55	21	2	20	6	2	3	3	4	5	5	6	8	19
GEORGIA TOTAL	55 56	16	3	60	10	3	4	5	6	6	7	8	10	11
TENNESSEE TOTAL	55 56	32		30	5	1	2	3	3	4	4	5	7	9
ILLINOIS TOTAL	55 56	106		200	19	4	6	7	9	10	11	20	27	42
INDIANA TOTAL	55 56	86	1	100	18	4	5	7	9	10	19	21	28	31
OHIO TOTAL	55 57	35		99	20	5	6	9	10	11	16	24	34	49
WISCONSIN TOTAL	57	19	11	70	29	15	17	19	20	22	24	31	41	57
MINNESOTA TOTAL	54 55	21	2	60	8	2	3	4	4	5	5	6	10	11
MISSOURI TOTAL	55 56	50		50	10	3	4	6	7	8	9	10	17	21
LOUISIANA TOTAL	54 55	46		7	2		1	1	2	2	2	3	3	5
TEXAS TOTAL	54 55	119		60	3		1	1	1	2	2	3	4	5
COLORADO TOTAL	54 55	23		20	4		1	1	1	2	3	5	6	11
UTAH TOTAL	54 55	26	1	30	11	5	6	6	7	9	10	11	19	22
ALASKA TOTAL	54 55	13		120	17	1	4	5	7	10	10	11	11	22
CALIFORNIA TOTAL	55 56	107		100	16	3	5	7	9	10	15	20	22	30
OREGON TOTAL	54 55	20	20	100	65	28	31	44	52	62	74	88	93	99
WASHINGTON TOTAL	57	20	22	180	78	23	26	52	66	74	83	96	110	123
NEW ENGLND TOTAL	55 56	85	3	2800	67	9	11	19	21	26	29	41	50	74
MID ATLNTC TOTAL	54 56	423		210	25	4	7	9	12	16	20	26	37	58
MID EAST TOTAL	54 57	113		100	17	2	3	5	7	9	13	20	28	42
SOUTH EAST TOTAL	55 56	69		60	7	2	3	3	4	5	5	6	8	11
MID WEST TOTAL	55 57	246		200	19	4	6	8	9	11	19	21	29	43
GRT PLAINS TOTAL	54 56	71		60	9	3	4	4	5	7	8	10	11	20
GULF SOUTH TOTAL	54 55	165		60	3		1	1	2	2	2	3	4	5
ROCKY MNTN TOTAL	54 55	49		30	8		1	3	5	6	7	10	11	20
PAC COAST TOTAL	54 57	160		180	30	4	6	9	10	19	21	29	49	91
GRAND TOTAL	54 57	1381		2800	21	2	3	5	8	10	15	20	29	49

TABLE 18. NICKEL—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		30	9	1	2	3	3	5	9	10	19	22
LAKEHURST N J	1	55 56	17		39	8	1	3	4	5	5	6	10	13	16
KANAWHA CO W VA	1	55	17		20	3		1	1	2	3	3	4	5	6
DENVER COUNTY COLO	1	54 55	10		5	2	1	1	2	2	2	3	3	4	4
GRAND TOTAL		54 56	67		39	6	1	1	2	3	4	4	6	10	19
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12	2	200	30	2	5	9	9	10	20	20	30	30

TABLE 18. NICKEL—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) $\times 10^{-3}$

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		20	60	80	50	2800	20	40	20	40	90	100	100
AVERAGE		20	40	40	32	946	16	26	12	40	52	66	80
MINIMUM		20	20	20	20	20	10	20	9	40	30	50	60
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		60	30	50	10	20	20	300	30	70	40	60	40
AVERAGE		60	25	35	10	20	12	170	15	70	35	45	40
MINIMUM		60	20	20	10	20	5	40	10	70	30	30	40
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		20	80	50	4	80	20	40	30	30	70	20	60
AVERAGE		16	39	30	4	55	12	17	16	18	70	20	40
MINIMUM		8	8	10	4	30	6	3	3	7	70	20	20
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	2	5	1		1	2	1		1	2
MAXIMUM		16	10	59	35	10		3	27	30		25	40
AVERAGE		13	8	38	19	10		3	16	30		25	25
MINIMUM		9	6	18	9	10		3	6	30		25	10
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	2	4	2	1	4	1		2		1
MAXIMUM		24	51	40	23	5	11	22	4		18		7
AVERAGE		21	33	25	15	4	11	9	4		16		7
MINIMUM		19	16	11	10	3	11	4	4		15		7
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	2	1		1	1	2	3	2		2
MAXIMUM		25	72	28	10		7	14	95	17	12		19
AVERAGE		24	42	28	10		7	14	61	12	11		18
MINIMUM		24	26	28	10		7	14	28	9	10		17
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	3	4			1	2		2	3	2
MAXIMUM		39	8	21	53			5	19		38	26	18
AVERAGE		15	8	19	32			5	16		24	13	15
MINIMUM		3	8	19	14			5	13		10	6	13
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1		1	1	2	1		1	1	3
MAXIMUM		20	41	45			7	4	4		35	15	30
AVERAGE		13	30	45			7	3	4		35	15	18
MINIMUM		9	19	45			7	3	4		35	15	11
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	3	3		2	2	2	1		1	2
MAXIMUM		34	100	150	29		45	18	41	28		30	42
AVERAGE		27	72	85	25		43	13	38	28		30	32
MINIMUM		20	46	41	22		41	9	35	28		30	22
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		1	3	1	4	1	7	4	4	2	3	4	4
MAXIMUM		89	84	58	110	68	60	100	60	41	95	210	137
AVERAGE		89	66	58	78	68	38	67	26	40	69	119	91
MINIMUM		89	55	58	30	68	21	21	1	40	54	68	45
PHILADELPHIA PA	55 56												
NUMBER OF SAMPLES		17	13	13	13	18	12	13	13	10	8	8	9
MAXIMUM		120	69	43	98	130	74	23	40	40	52	89	83
AVERAGE		39	36	20	27	26	22	11	18	20	20	35	41
MINIMUM		9	11	9	9	8	5	1	6	8	12	7	15
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			3	7	8	10			8	10	10	8	
AVERAGE			3	7	6	6			8	6	5	8	
MINIMUM			3	7	5	3			8	3		8	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			17	12	3	3		13		17	9	9	17
AVERAGE			17	12	3	1		6		6	4	7	16
MINIMUM			17	12	3					3		5	15
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			17		98	5	12	10	57	14	6		11
AVERAGE			17		53	2	8	10	24	10	6		11
MINIMUM			17		8		5	10	7	7	6		11
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		20	4	6	5	20	4	3		5	7	5	4
AVERAGE		13	4	6	2	10	4	3		3	3	4	3
MINIMUM		9	4	6			4	3		2	2	3	2
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		10	9	40			100			20	20	10	8
AVERAGE		8	6	23			40			15	13	6	8
MINIMUM		5	4	10			10			10	7	3	8

TABLE 18. NICKEL—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			20	10	20	20	2	8	200	10	5	10	8
AVERAGE			12	10	14	10	1	8	200	9	2	8	8
MINIMUM			7	10	9	5		8	200	8		6	8
WASHINGTON DC	55 56												
NUMBER OF SAMPLES		1	2		1	3	2	1	3	2	1	1	
MAXIMUM		40	30		20	30	40	30	20	30	40	20	
AVERAGE		40	25		20	23	25	30	12	25	40	20	
MINIMUM		40	20		20	20	10	30	8	20	40	20	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	1	1	3	13	13	12	6	1	6
MAXIMUM		2	86	13	9	3	12	30	28	32	14	4	80
AVERAGE		2	33	13	9	3	6	7	6	9	7	4	21
MINIMUM		2	3	13	9	3					2	4	2
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		35	45	57	84	53	33	33	56	67			
AVERAGE		35	43	37	60	53	26	31	34	67			
MINIMUM		35	42	17	21	53	19	29	19	67			
CHARLESTON W VA	55												
NUMBER OF SAMPLES			1	1		2	2	2	1	1	3	2	1
MAXIMUM			8	7		20	10	5	10	9	8	100	7
AVERAGE			8	7		11	6	4	10	9	6	50	7
MINIMUM			8	7		3	3	3	10	9	3		7
TAMPA FLA	55												
NUMBER OF SAMPLES		2	1	1	3	2	1	2	2	3	1	2	1
MAXIMUM		20	8	20	5	5	3	5	20	9	7	3	4
AVERAGE		11	8	20	4	4	3	4	12	6	7	2	4
MINIMUM		3	8	20	3	3	3	3	5	5	7	2	4
ATLANTA GA	55 56												
NUMBER OF SAMPLES		1	1	3	2	1	1	3	1		1	1	1
MAXIMUM		10	7	9	6	60	3	20	7		10	6	8
AVERAGE		10	7	6	5	60	3	10	7		10	6	8
MINIMUM		10	7	4	4	60	3	3	7		10	6	8
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			6	30	3	8		3	6	9	18	4	10
AVERAGE			3	13	1	6		3	4	5	8	3	7
MINIMUM				4		5		3	2	3	2	2	4
CHICAGO ILL	55												
NUMBER OF SAMPLES		2	3	6	3	8	11	9	6	4	10	10	5
MAXIMUM		10	50	100	70	50	100	20	30	30	30	30	50
AVERAGE		9	30	33	39	15	20	7	11	19	13	16	30
MINIMUM		9	10	3	9	4	6		4	7	5	7	20
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		50	6	200	30	50	9	10	10	60	3	9	20
AVERAGE		21	5	104	19	26	6	10	9	23	3	7	14
MINIMUM		4	5	8	9	3	4	10	6	2	3	6	4
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		60	30	70	50	30	30	11	100	20	30	30	40
AVERAGE		30	15	27	26	20	12	6	24	9	21	10	13
MINIMUM		5	6	4	4	10	2	1	4	5	7	5	3
CINCINNATI OHIO	55												
NUMBER OF SAMPLES		2		2	2	2	2	2	3	2	2	2	2
MAXIMUM		10		20	10	10	12	10	10	9	22	99	10
AVERAGE		8		13	7	7	11	7	8	4	14	54	10
MINIMUM		6		6	5	5	10	5	4		6	10	10
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				23	50	33	16	46	53	21	51		
AVERAGE				23	38	33	16	39	42	21	46		
MINIMUM				23	26	33	16	33	31	21	42		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		58	70	39	55	25	11	22	17	36	18		
AVERAGE		49	44	27	36	22	11	20	16	28	18		
MINIMUM		41	19	15	25	19	11	19	16	20	18		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	1	1	1		2		5	4	3	2	1
MAXIMUM		10	7	10	6		5		60	5	6	10	20
AVERAGE		10	7	10	6		3		14	4	5	7	20
MINIMUM		10	7	10	6		2		2	4	4	4	20
KANSAS CITY MO	55 56												
NUMBER OF SAMPLES		4	2	3	3	3	2	2	4	1	1	1	1
MAXIMUM		30	17	12	5	6	10	5	10	4	7	10	20
AVERAGE		15	13	8	4	2	7	3	7	4	7	10	20
MINIMUM		5	10	7	4		4	1		4	7	10	20

TABLE 18. NICKEL—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		30	50		20	8	7	8	20	10	8	10	20
AVERAGE		25	35		14	6	6	6	12	10	8	9	15
MINIMUM		20	20		8	4	5	4	6	10	8	8	10
NEW ORLEANS LA	54 55												
NUMBER OE SAMPLES		2	3	3	4	4	4	6	4	4	4	5	3
MAXIMUM		3	5	3	2	7	3	7	5	6	5	3	7
AVERAGE		1	4	1		3	1	3	3	3	1	1	4
MINIMUM			3			2			3	3			
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2
MAXIMUM		5	10	7	5	3	9	3	2	3	3	4	4
AVERAGE		3	8	4	4	2	7	2	2	2	3	2	3
MINIMUM		2	6	2	4	2	5	2	2	1	3	1	2
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			5	6	4	5	6	7	3	6	6	9	7
MAXIMUM			3	6	3	3	5	5	3	16	60	3	12
AVERAGE			2	2		1	3	2	2	7	12	1	5
MINIMUM													1
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	2	2	2	3	3	4	2	3
MAXIMUM		4		3		6	10	3	5		2	2	5
AVERAGE		1		2		5	5	2	2		1	1	2
MINIMUM				2		4		2					
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	1	2
MAXIMUM		5	5	10	20	20		10	3			6	
AVERAGE		2	4	6	15	11		6	1			6	
MINIMUM			3	3	10	3		3				6	
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	2	2	2	2	2	2	2	2	2	2	3
MAXIMUM		20	30	30	7	20	30	20	10	10	10	10	10
AVERAGE		9	18	18	6	13	20	13	10	10	10	8	7
MINIMUM		1	7	7	5	6	10	7	10	10	10	6	6
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES			1	2	2		4		1		1	1	1
MAXIMUM			4	10	20		120		10		10	5	7
AVERAGE			4	5	11		39		10		10	5	7
MINIMUM			4		3		9		10		10	5	7
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		30	8	20	10	10	9	7	4	5	20	20	20
AVERAGE		22	5	11	10	5	7	5	4	3	9	7	20
MINIMUM		7	3	3	10	3	5	3	4	2	2		20
PASADENA CALIF	55 56												
NUMBER OF SAMPLES		2	2	1	3	3	2	3		2	2		
MAXIMUM		100	100	3	20	30	10	30		30	40		
AVERAGE		100	52	3	15	21	8	20		25	30		
MINIMUM		100	5	3	10	10	7	10		20	20		
SAN JOSE CALIF	55 56												
NUMBER OF SAMPLES		1	2	2		3	3	3	3	2	1	2	3
MAXIMUM		20	10	5		40	10	20	30	35	16	20	40
AVERAGE		20	9	4		19	7	13	24	34	16	12	22
MINIMUM		20	9	4		7	6	10	21	34	16	5	7
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		20	5	10	7	10	30	20	90	10	20	40	10
AVERAGE		13	6	10	7	10	20	17	30	10	20	19	10
MINIMUM		10	5	10	7	10	10	9	10	10	20	5	10
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1		3	1			2	7	5	1		
MAXIMUM		100		100	30			100	100	90	100		
AVERAGE		100		60	30			85	57	64	100		
MINIMUM		100		20	30			70	30	30	100		
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		180	120	140	30	120	58	75	95	71	88		
AVERAGE		150	110	140	27	90	40	61	59	55	88		
MINIMUM		120	100	140	25	71	22	48	24	26	88		

TABLE 18. NICKEL— SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-2}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		20	20	20		2	30	10	10	10		9	30
AVERAGE		11	20	12		2	16	6	5	6		5	13
MINIMUM		3	20	4		2		3	2	3		2	4
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	2	2	2	1	1		2	1	2	1
MAXIMUM		14		11	39	6	13	5		5	3	17	5
AVERAGE		12		8	21	3	13	5		4	3	11	5
MINIMUM		10		5	3		13	5		4	3	6	5
KANAWHA CO W VA	55												
NUMBER OF SAMPLES		1	3	2		2	1	3	1		2	1	1
MAXIMUM		3	7	5		20	4	3	5		4		
AVERAGE		3	2	4		13	4	1	5		3		
MINIMUM		3		3		6	4		5		3		
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			2		4			5		3	3	4	2
AVERAGE			2		4			5		2	3	4	2
MINIMUM			2		4			5		2	3	4	2
NONURBAN													
PT WORONZOF ALASKA	55 56												
NUMBER OF SAMPLES		1		1	1	2		1	2	1	1	1	1
MAXIMUM		30		2	200	30		20	9	6	9	20	10
AVERAGE		30		2	200	25		20	7	6	9	20	10
MINIMUM		30		2	200	20		20	5	6	9	20	10

TABLE 19. POTASSIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^1											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
NEW YORK N Y	2	54 55	28	1	59	25	6	11	15	22	27	30	33	36	41
	3	54	7		28	10	1	1	4	9	10	10	11	12	12
		54 55	36		59	21	4	9	11	14	22	28	30	34	39
PHILADELPHIA PA		54	10		28	12	1	3	7	8	12	12	13	13	27
WASHINGTON DC		54 55	25		34	15	1	5	9	14	17	18	20	21	27
LOUISVILLE KY		54	9	3	44	25	3	11	15	17	21	21	36	38	46
CHARLESTON W VA	1	54	7		42	13	1	1	5	5	6	6	9	27	27
TAMPA FLA	1	54	10	1	18	7	1	2	2	3	5	5	11	15	17
ATLANTA GA	1	54	9		26	10	1	4	4	8	8	8	9	15	26
CHICAGO ILL		54	37		86	32	2	11	19	28	32	37	41	48	58
		55	6	5	44	30	5	5	29	29	30	38	38	43	43
		54 55	43		86	31	2	15	23	28	32	37	41	45	58
DETROIT MICH	1	53 54	29		71	27	4	11	14	21	23	26	37	43	51
CINCINNATI OHIO	1	54 55	73	3	51	15	5	8	10	12	14	16	18	22	28
	2	54	19	7	53	23	11	13	16	19	22	23	24	27	41
	4	54	16	3	36	16	5	6	11	14	15	17	21	23	23
	5	54	27	3	69	28	9	10	14	17	21	29	34	48	61
		54 55	135	3	69	19	6	9	12	14	16	18	22	26	36
MINNEAPOLIS MINN	1	54	14	4	20	11	4	5	6	9	11	12	15	16	19
KANSAS CITY MO		54	6	2	8	4	2	2	3	3	4	4	4	6	6
NEW ORLEANS LA		54	4	6	22	14		6	6	9	9	9	19	19	24
FT WORTH TEXAS	1	54	6	5	59	20	5	5	7	7	9	11	11	30	30
LAKEWORTH TEXAS	1	54	5		33	17	1	1	9	9	13	13	32	32	34
HOUSTON TEXAS	1	54	16		48	10			1	1	6	10	11	19	24
SALT LAKE CITY UTAH	2	54	5	14	42	22	14	14	15	15	17	17	24	24	43
ANCHORAGE ALASKA	1	54 55	24		400	28		1	4	7	9	11	15	19	34
LOS ANGELES CALIF		54	19	1	40	15	2	4	7	9	11	15	23	27	30
PASADENA CALIF	1	54 55	24		52	22	2	11	14	20	22	24	30	32	38
BERKELEY CALIF	1	54 55	35	1	35	12	5	7	8	10	12	13	15	16	26
SAN JOSE CALIF	1	54 55	34		25	13	1	7	10	14	16	17	18	19	20
PORTLAND OREGON	1	54	19		32	12	1	2	8	10	10	11	13	17	27
	2	54	15		29	16	1	1	16	17	19	21	24	26	29
	4	54	10	12	36	21	12	13	15	17	18	19	26	27	34
	5	54	10	10	23	15	10	11	12	13	15	16	17	19	23
		54	54		36	15	1	9	11	13	15	17	21	25	29

TABLE 19. POTASSIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW JERSEY TOTAL	55	10	11	30	18	11	14	15	16	17	18	19	21	27
NEW YORK TOTAL	54 55	36		59	21	4	9	11	14	22	28	30	34	39
PENNSYLVANIA TOTAL	54	10		28	12	1	3	7	8	12	12	13	13	27
DIS COLUMBIA TOTAL	54 55	25		34	15	1	5	9	14	17	18	20	21	27
KENTUCKY TOTAL	54	9	3	44	25	3	11	15	17	21	21	36	38	46
WEST VIRGINA TOTAL	54	7		42	13	1	1	5	5	6	6	9	27	27
FLORIDA TOTAL	54	10	1	18	7	1	2	2	3	5	5	11	15	17
GEORGIA TOTAL	54	9		26	10	1	4	4	8	8	8	9	15	26
ILLINOIS TOTAL	54 55	43		86	31	2	15	23	28	32	37	41	45	58
MICHIGAN TOTAL	53 54	33		71	24	4	8	13	14	22	24	35	41	51
OHIO TOTAL	54 55	135	3	69	19	6	9	12	14	16	18	22	26	36
MINNESOTA TOTAL	54	14	4	20	11	4	5	6	9	11	12	15	16	19
MISSOURI TOTAL	54	6	2	8	4	2	2	3	3	4	4	4	6	6
LOUISIANA TOTAL	54	4	6	22	14		6	6	9	9	9	19	19	24
TEXAS TOTAL	54	29		59	13		1	1	6	9	10	13	24	32
COLORADO TOTAL	54	3	4	11	6		4	4	4	4	4	4	4	11
UTAH TOTAL	54	5	14	42	22	14	14	15	15	17	17	24	24	43
ALASKA TOTAL	54 55	24		400	28		1	4	7	9	11	15	19	34
CALIFORNIA TOTAL	54 55	113		52	15	2	7	9	12	14	17	19	23	30
OREGON TOTAL	54	54		36	15	1	9	11	13	15	17	21	25	29
MID ATLNTC TOTAL	54 55	56		59	19	4	9	11	13	17	22	27	30	36
MID EAST TOTAL	54 55	41		44	17	1	5	6	14	16	19	20	26	36
SOUTH EAST TOTAL	54	19		26	9	1	2	4	5	8	8	11	15	19
MID WEST TOTAL	53 55	211		86	22	5	9	12	15	18	22	27	35	46
GRT PLAINS TOTAL	54	20	2	20	9	3	4	4	6	8	9	12	15	17
GULF SOUTH TOTAL	54	33		59	13		1	5	6	9	10	15	23	32
ROCKY MNTN TOTAL	54	8	4	42	16	4	4	4	11	14	15	17	17	24
PAC COAST TOTAL	54 55	191		400	17	1	6	9	11	14	17	19	24	30
GRAND TOTAL	53 55	579		400	18	3	6	9	12	15	18	22	28	37

TABLE 19. POTASSIUM—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^1											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
KANAWHA CO W VA	1	54	6		23	6	1	1	1	1	4	4	4	9	9
HILLSBOROUGH CO FLA	1	54	4		11	6		1	1	4	4	4	10	10	11
FULTON CO GEORGIA	1	54	5		29	8	1	1	2	2	4	4	6	6	30
HAMILTON COUNTY OHIO	1	54 55	36	1	34	12	6	7	8	9	10	12	13	15	21
TONKA BAY MINN	1	54	9		38	9	1	2	2	5	6	6	8	10	11
SALT LAKE CO UTAH	1	54	5		23	10	1	1	9	9	11	11	12	12	24
MULTNOMAH CNTY ORE	1	54	12	4	15	9	4	5	6	7	11	11	12	13	14
GRAND TOTAL		54 55	79		38	10	1	4	6	8	9	11	12	14	22

TABLE 19. POTASSIUM—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
NEW YORK N Y	54 55												
NUMBER OF SAMPLES		2	3	4	4	4	3	3	1	4	3	3	2
MAXIMUM		32	21	29	15	28	59	39	39	29	42	33	35
AVERAGE		18	14	12	8	10	37	37	39	19	36	26	27
MINIMUM		4	9	2	1		23	34	39	11	28	22	19
WASHINGTON DC	54 55												
NUMBER OF SAMPLES			3		2	3	4	3	4	4	2		
MAXIMUM			27			20	16	34	23	32	18		
AVERAGE			22			8	9	24	18	18	16		
MINIMUM			20				5	19	14	6	15		
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		2	4			4	9	5	3	4	6	3	3
MAXIMUM		35	44			14	41	48	51	37	63	55	86
AVERAGE		32	29			8	16	36	31	34	47	41	59
MINIMUM		29	5			2		17	18	28	32	25	28
DETROIT MICH	53 54												
NUMBER OF SAMPLES			2	3	4	2	1					17	
MAXIMUM			22	26	46	15	71					61	
AVERAGE			21	24	31	10	71					26	
MINIMUM			20	23	14	5	71						
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		1	6	44	18	17	17	6	6	10	5	1	4
MAXIMUM		17	28	69	68	30	32	25	17	25	33	38	20
AVERAGE		17	15	22	22	16	18	15	14	17	13	38	14
MINIMUM		17	3	4	5	3	3	8	8	10	4	38	11
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	1		5	4	3	1	2	3	2		2
MAXIMUM		9	50		400	32	19	18	9	9	7		12
AVERAGE		9	50		96	10	12	18	4	3	3		9
MINIMUM		9	50		7		4	18					7
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	4	6	2	2					
MAXIMUM			7	28	40	18	22	30					
AVERAGE			7	12	27	7	15	28					
MINIMUM			7	1	10	2	9	27					
PASADENA CALIF	54 55												
NUMBER OF SAMPLES		2	3	1	1	2	3	4	2	2	4		
MAXIMUM		13	31	2		6	20	31	25	34	52		
AVERAGE		11	23	2		5	16	28	23	31	39		
MINIMUM		10	17	2		4	15	22	22	28	22		
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		2	2	2	3	2	3	4	5	4
MAXIMUM		35	25		6	2	14	26	14	16	16	32	24
AVERAGE		17	13		3	1	11	16	11	15	11	16	14
MINIMUM		7	5		1	1	8	10	8	15	9	7	9
SAN JOSE CALIF	54 55												
NUMBER OF SAMPLES		3	4	2	2	2	2	2	2	4	3	5	3
MAXIMUM		18	20	25	16	7	20	21	21	21	19	19	20
AVERAGE		15	16	16	8	4	14	11	18	14	19	12	15
MINIMUM		13	11	7		1	8	1	16	2	19	2	9
PORTLAND OREGON	54												
NUMBER OF SAMPLES			2	6	3	3					20	20	
MAXIMUM			26	8	4	17					25	36	
AVERAGE			18	1	1	10					16	22	
MINIMUM			11			9					10	11	
SUBURBAN													
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	4	2	5	3	4	4	4	4	3	2
MAXIMUM			9	34	13	16	23	28	15	17	11	12	8
AVERAGE			9	17	11	7	19	16	11	11	8	9	7
MINIMUM			9	1	9	2	14	11	9	7	6	8	7

TABLE 20. SODIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻¹											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
NEW YORK N Y		54 55	35		109	24	1	5	11	18	24	25	28	32	54
PHILADELPHIA PA		54	10		52	14	1	1	7	10	13	14	15	15	19
WASHINGTON DC		54 55	26		26	6			1	1	1	4	7	15	20
LOUISVILLE KY		54	6		14	6	1	1	1	1	3	7	7	13	13
CHARLESTON W VA	1	54	7		65	22	1	1	1	19	21	21	26	29	29
TAMPA FLA	1	54	8		35	13	1	1	1	4	5	6	23	23	34
ATLANTA GA	1	54	8		25	10	1	1	1	4	8	9	17	17	23
CHICAGO ILL	1	54	3	1	11	5		1	1	1	5	5	5	5	11
	2	54 55	35		119	34	1	15	23	28	33	36	45	48	60
	3	54	3								1	1	1	1	1
		54 55	41		119	29	1	1	11	19	29	34	42	47	54
DETROIT MICH	1	53	21	10	67	33	13	16	17	19	31	36	44	57	60
	1	54	11	2	172	77	2	10	32	44	91	101	107	112	138
	1	53 54	32	2	172	48	10	16	19	30	36	44	59	74	107
CINCINNATI OHIO	1	54	60		55	4			1	1	1	2	4	7	10
	1	55	4	19	37	26		19	19	23	23	23	26	26	40
	1	54 55	64		55	5			1	1	1	3	6	9	17
	2	54	14		17	6		1	1	1	4	8	11	13	14
	3	54	13		19	8		1	1	5	8	8	12	13	18
	4	54	20	1	56	17	2	8	12	13	16	17	19	23	26
		54	107		56	7			1	1	4	7	10	13	18
		55	4	19	37	26		19	19	23	23	23	26	26	40
		54 55	111		56	8			1	1	4	7	11	15	19
MINNEAPOLIS MINN	1	54	14		23	4				1	1	1	3	11	17
KANSAS CITY MO		54	11		8	2			1	1	1	4	4	6	8
NEW ORLEANS LA		54	4		13	4		1	1	1	1	1	2	2	13
FT WORTH TEXAS	1	54	5		8	2			1	1	1	1	4	4	8
LAKEWORTH TEXAS	1	54	2						1	1	1	1	1	1	1
HOUSTON TEXAS	1	54	17		99	24	1	5	7	11	19	20	21	26	49
BELLAIRE TEXAS	1	54	2	1	16	8			1	1	1	1	1	17	17
SALT LAKE CITY UTAH	2	54	5		26	5			1	1	1	1	1	1	26
ANCHORAGE ALASKA	1	54 55	27		275	17		1	2	4	5	7	11	14	19
LOS ANGELES CALIF		54	19	5	125	42	10	14	20	26	34	36	54	71	82
PASADENA CALIF	1	54 55	28		77	32	1	11	15	20	29	36	47	49	64
BERKELEY CALIF	1	54 55	35		110	33	10	13	18	22	26	36	44	52	72
SAN JOSE CALIF	1	54 55	34		70	22	3	8	13	16	19	21	29	32	46
PORTLAND OREGON	1	54	19		33	14	1	6	9	11	13	14	16	19	31
	2	54	10	12	37	29	13	23	26	29	32	33	35	36	38
	4	54	15		178	25	1	1	7	7	14	18	28	29	49
	5	54	10	19	55	30	19	24	25	26	29	31	32	34	36
		54	54		178	23	1	7	12	16	19	25	30	32	36

TABLE 20. SODIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{1}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW JERSEY TOTAL	55	10	6	51	17	6	6	7	7	14	17	21	22	23
NEW YORK TOTAL	54 55	35		109	24	1	5	11	18	24	25	28	32	54
PENNSYLVANIA TOTAL	54	10		52	14	1	1	7	10	13	14	15	15	19
DIS COLUMBIA TOTAL	54 55	28		26	6			1	1	1	4	7	15	20
KENTUCKY TOTAL	54	6		14	6	1	1	1	1	3	7	7	13	13
WEST VIRGINA TOTAL	54	7		65	22	1	1	1	19	21	21	26	29	29
FLORIDA TOTAL	54	8		35	13	1	1	1	4	5	6	23	23	34
GEORGIA TOTAL	54	8		25	10	1	1	1	4	8	9	17	17	23
ILLINOIS TOTAL	54 55	41		119	29	1	1	11	19	29	34	42	47	54
MICHIGAN TOTAL	53 54	36		172	43	1	10	16	19	31	43	57	67	101
OHIO TOTAL	54 55	111		56	8			1	1	4	7	11	15	19
MINNESOTA TOTAL	54	14		23	4				1	1	1	3	11	17
MISSOURI TOTAL	54	11		6	2			1	1	1	4	4	6	8
LOUISIANA TOTAL	54	4		13	4		1	1	1	1	1	2	2	13
TEXAS TOTAL	54	26		99	16		1	1	5	8	16	19	21	36
UTAH TOTAL	54	5		26	5			1	1	1	1	1	1	26
ALASKA TOTAL	54 55	27		275	17		1	2	4	5	7	11	14	19
CALIFORNIA TOTAL	54 55	117		125	31	7	11	15	20	25	32	39	49	67
OREGON TOTAL	54	54		178	23	1	7	12	16	19	25	30	32	36
MID ATLNTC TOTAL	54 55	55		109	21	1	6	10	13	18	22	25	29	51
MID EAST TOTAL	54 55	41		65	8			1	1	3	7	14	19	23
SOUTH EAST TOTAL	54	[illegible]		35	11	1	1	4	4	6	9	17	23	26
MID WEST TOTAL	53 55	188		172	19		1	1	6	11	15	21	33	54
GRT PLAINS TOTAL	54	25		23	3			1	1	1	1	4	8	11
GULF SOUTH TOTAL	54	30		99	15		1	1	4	7	11	17	20	36
ROCKY MNTN TOTAL	54	6		26	3					1	1	1	1	1
PAC COAST TOTAL	54 55	198		275	27	2	7	11	16	20	26	32	39	57
GRAND TOTAL	53 55	561		275	20	1	1	7	11	16	20	27	35	53

TABLE 20. SODIUM—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-1}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
KANAWHA CO W VA	1	54	6		5	3	1	1	1	1	4	4	4	5	5
HILLSBOROUGH CO FLA	1	54	4		32	11		1	1	1	1	1	14	14	32
FULTON CO GEORGIA	1	54	4		26	15		1	1	15	15	15	21	21	26
HAMILTON COUNTY OHIO	1	54 55	30		18	4		1	1	2	3	4	6	8	10
TONKA BAY MINN	1	54	8		7						1	1	1	1	1
SALT LAKE CO UTAH	1	54	5		10	2			1	1	1	1	1	1	10
MULTNOMAH CNTY ORE	1	54	12		24	12	1	2	7	7	9	14	18	20	21
GRAND TOTAL		54 55	69		32	6		1	1	1	3	5	8	14	19

TABLE 20. SODIUM—URBAN AND SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻¹

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
NEW YORK N Y	54 55												
NUMBER OF SAMPLES		3	3	2	4	4	3	3	1	4	3	3	2
MAXIMUM		25	52	57	43	29	65	31	29	34	30	25	109
AVERAGE		14	36	32	24	8	25	23	29	28	17	8	61
MINIMUM		5	24	8	11			18	29	25	4		14
WASHINGTON DC	54 55												
NUMBER OF SAMPLES			4	1	3	3	4	3	4	4	2		
MAXIMUM			26	8	7		3	20	1	15	5		
AVERAGE			22	8	4			7		8	2		
MINIMUM			19	8									
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		2	4			2	9	5	3	4	6	3	3
MAXIMUM		45	51			5	19	36	76	47	86	57	119
AVERAGE		37	41			2	5	16	34	36	46	36	71
MINIMUM		29	32							27	25	19	44
DETROIT MICH	53 54												
NUMBER OF SAMPLES			2	3	4	1	1					21	
MAXIMUM			129	172	102	2	69					67	
AVERAGE			119	118	46	2	69					33	
MINIMUM			109	91	10	2	69					10	
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		1	5	34	14	8	17	6	6	10	5	1	4
MAXIMUM		26	37	56	33	14	16	2	7	14	12	25	55
AVERAGE		26	18	12	9	4	2		2	6	3	25	14
MINIMUM		26	1									25	
HOUSTON TEXAS	54												
NUMBER OF SAMPLES		1	2	2	1	3	8						
MAXIMUM		67	19	99	21	21	47						
AVERAGE		67	18	67	21	9	15						
MINIMUM		67	17	36	21		1						
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	2	2	5	4	3	1	2	3	2		2
MAXIMUM		11	5	17	275	26	10	13	5		4		9
AVERAGE		11	4	9	68	11	5	13	2		2		7
MINIMUM		11	4	2	2			13					5
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	4	6	2	2					
MAXIMUM			32	85	55	25	69	125					
AVERAGE			32	57	30	15	61	103					
MINIMUM			32	35	13	5	53	81					
PASADENA CALIF	54 55												
NUMBER OF SAMPLES		2	4	2	3	2	3	4	2	2	4		
MAXIMUM		20	20	33	28	20	46	77	56	65	62		
AVERAGE		10	15	21	12	10	29	58	45	46	54		
MINIMUM			12	9		1	11	46	35	28	45		
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		2	2	2	3	2	3	4	5	4
MAXIMUM		13	23		29	74	71	77	52	48	50	110	20
AVERAGE		5	19		23	66	54	55	45	41	37	41	11
MINIMUM			15		18	59	38	16	39	31	25	10	3
SAN JOSE CALIF	54 55												
NUMBER OF SAMPLES		3	4	2	2	2	2	2	2	4	3	5	3
MAXIMUM		9	19	32	40	49	70	28	47	40	48	26	10
AVERAGE		7	14	28	36	42	35	27	39	25	27	16	4
MINIMUM		5	7	25	32	35	1	26	32	19	16	8	
PORTLAND OREGON	54												
NUMBER OF SAMPLES			8	6	3	3					20	20	
MAXIMUM			31	16	14	9					55	178	
AVERAGE			21	5	8	5					30	26	
MINIMUM			12		1						12	3	
SUBURBAN													
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	3	1	1	3	4	4	4	4	3	2
MAXIMUM			10	8	17		18	13	10	4	4	7	9
AVERAGE			10	4	17		6	3	5	3	3	3	4
MINIMUM			10	1	17					2	2	2	

TABLE 21. STRONTIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
NEW YORK N Y		54 55	34		43	6			1	1	2	4	6	9	18
PHILADELPHIA PA		54	10		49	11		1	1	1	4	5	8	20	33
WASHINGTON DC		54 55	29		61	12	3	4	5	7	10	11	13	16	20
LOUISVILLE KY		54	5								1	1	1	1	1
CHARLESTON W VA	1	54	6		36	13	1	1	1	1	5	6	6	33	33
TAMPA FLA	1	54	7		11	6	1	1	3	5	7	7	8	10	10
ATLANTA GA	1	54	5	3	14	6	3	3	3	3	4	4	7	7	14
CHICAGO ILL	1	54	3	5	8	6		5	5	5	7	7	7	7	8
	2	54 55	35		13	3			1	1	1	2	5	6	10
	3	54	3		11	6		1	1	1	8	8	8	8	11
		54 55	41		13	3			1	1	2	4	6	8	10
DETROIT MICH	1	53	20	1	57	33	13	24	28	29	32	35	41	43	45
	1	54	9	4	31	17	4	11	13	13	16	16	18	22	27
	1	53 54	29	1	57	28	11	13	18	27	29	30	33	41	44
CINCINNATI OHIO	1	54	69		30	2				1	1	1	1	3	8
	1	55	4	5	19	11		5	5	9	9	9	11	11	20
	1	54 55	73		30	2				1	1	1	1	5	11
	2	54	13		24	8		1	1	2	11	12	12	13	14
	4	54	13		23	10		1	6	9	12	12	16	17	18
	5	54	17		34	12	1	2	5	6	11	13	14	22	24
		54	112		34	5			1	1	1	3	8	12	16
		55	4	5	19	11		5	5	9	9	9	11	11	20
		54 55	116		34	5			1	1	1	5	9	12	16
MINNEAPOLIS MINN	1	54	15		18	4			1	1	1	2	5	6	16
KANSAS CITY MO		54	11		50	18	1	1	2	3	21	22	24	27	48
NEW ORLEANS LA		54	4							1	1	1	1	1	1
FT WORTH TEXAS	1	54	6		22	5			1	1	1	5	5	7	7
LAKEWORTH TEXAS	1	54	2	2	5	3			2	2	2	2	2	5	5
HOUSTON TEXAS	1	54	17		59	24	2	5	10	11	29	30	32	33	50
BELLAIRE TEXAS	1	54	4	10	45	29		10	10	30	30	30	37	37	45
DENVER COL	1	54	3	1	4	2		1	1	1	3	3	3	3	4
SALT LAKE CITY UTAH	2	54	5		22	4			1	1	1	1	1	1	22
ANCHORAGE ALASKA	1	54 55	25		64	23	1	1	7	20	23	25	33	39	50
LOS ANGELES CALIF		54	17		108	19	3	4	5	6	8	17	20	35	37
PASADENA CALIF	1	54 55	28		61	12			1	1	1	8	18	20	30
BERKELEY CALIF	1	54 55	33		16	2				1	1	1	2	3	5
SAN JOSE CALIF	1	54 55	33		16	2			1	1	1	2	2	3	5
PORTLAND OREGON	1	54	19		20	2				1	1	1	1	1	9
	2	54	15		5						1	1	1	1	4
	4	54	10	1	9	6	1	3	5	6	6	6	7	8	8
	5	54	10		7	2		1	1	2	2	3	3	4	4
		54	54		20	2				1	1	1	3	5	8

TABLE 21. STRONTIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
NEW JERSEY TOTAL	55	10		11	4		1	1	3	3	4	4	7	11
NEW YORK TOTAL	54 55	34		43	6			1	1	2	4	6	9	18
PENNSYLVANIA TOTAL	54	10		49	11		1	1	1	4	5	8	20	33
DIS COLUMBIA TOTAL	54 55	29		61	12	3	4	5	7	10	11	13	16	20
KENTUCKY TOTAL	54	5								1	1	1	1	1
WEST VIRGINA TOTAL	54	6		36	13	1	1	1	1	5	6	6	33	33
FLORIDA TOTAL	54	7		11	6	1	1	3	5	7	7	8	10	10
GEORGIA TOTAL	54	5	3	14	6	3	3	3	3	4	4	7	7	14
ILLINOIS TOTAL	54 55	41		13	3			1	1	2	4	6	8	10
MICHIGAN TOTAL	53 54	33	1	57	25	3	11	13	18	28	29	32	37	44
OHIO TOTAL	54 55	116		34	5			1	1	1	5	9	12	16
MINNESOTA TOTAL	54	15		18	4			1	1	1	2	5	6	16
MISSOURI TOTAL	54	11		50	18	1	1	2	3	21	22	24	27	48
LOUISIANA TOTAL	54	4							1	1	1	1	1	1
TEXAS TOTAL	54	29		59	19	1	2	5	9	11	27	30	32	45
COLORADO TOTAL	54	3	1	4	2		1	1	1	3	3	3	3	4
UTAH TOTAL	54	5		22	4			1	1	1	1	1	1	22
ALASKA TOTAL	54 55	25		64	23	1	1	7	20	23	25	33	39	50
CALIFORNIA TOTAL	54 55	112		108	7			1	1	1	3	4	8	20
OREGON TOTAL	54	54		20	2				1	1	1	3	5	8
MID ATLNTC TOTAL	54 55	54		49	7			1	1	3	4	6	10	20
MID EAST TOTAL	54 55	40		61	10	1	1	4	5	6	10	12	16	27
SOUTH EAST TOTAL	54	12		14	6	1	2	3	4	5	7	7	10	11
MID WEST TOTAL	53 55	190		57	8			1	1	3	6	11	14	27
GRT PLAINS TOTAL	54	26		50	10		1	1	1	3	6	13	21	24
GULF SOUTH TOTAL	54	33		59	17		1	2	5	10	22	29	32	45
ROCKY MNTN TOTAL	54	8		22	3				1	1	1	3	3	4
PAC COAST TOTAL	54 55	191		108	8			1	1	1	3	5	15	25
GRAND TOTAL	53 55	554		108	8			1	1	3	5	9	15	28

TABLE 21. STRONTIUM—SUBURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
LAKEHURST N J	1	55	2	1	1	1			1	1	1	1	1	1	1
KANAWHA CO W VA	1	54	4		10	3		1	1	1	1	1	4	4	10
HILLSBOROUGH CO FLA	1	54	2	2	7	4			2	2	2	2	2	7	7
FULTON CO GEORGIA	1	54	3	4	14	9		4	4	4	10	10	10	10	14
HAMILTON COUNTY OHIO	1	54	29		16	1				1	1	1	1	1	4
	1	55	1	1	1	1					1	1	1	1	1
	1	54 55	30		16	1					1	1	1	1	4
TONKA BAY MINN	1	54	8								1	1	1	1	1
SALT LAKE CO UTAH	1	54	5		29	8			1	1	1	1	12	12	30
MULTNOMAH CNTY ORE	1	54	12		2						1	1	1	1	1
GRAND TOTAL		54 55	66		29	2				1	1	1	1	2	7

TABLE 21. STRONTIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
NEW YORK N Y	54 55												
NUMBER OF SAMPLES		3	3	3	2	4	3	3	1	4	3	3	2
MAXIMUM		39	16	43			6	6	5	10	10	4	
AVERAGE		13	7	29			3	2	5	7	5	2	
MINIMUM				18					5		2		
WASHINGTON DC	54 55												
NUMBER OF SAMPLES			4	1	4	3	4	3	4	4	2		
MAXIMUM			25	31	61	11	11	14	17	19	14		
AVERAGE			8	31	20	7	7	9	9	15	14		
MINIMUM			2	31	4	4	4	6		8	14		
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		2	4			2	9	5	3	4	6	3	3
MAXIMUM		10	9			9	13	4		2	5	6	12
AVERAGE		6	5			8	6				2	4	6
MINIMUM		3				8					1	2	2
DETROIT MICH	53 54												
NUMBER OF SAMPLES			2	3	2	1	1					20	
MAXIMUM			18	16	27	21	31					57	
AVERAGE			15	13	15	21	31					33	
MINIMUM			13	11	4	21	31					1	
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		1	5	44	9	8	17	6	6	10	5	1	4
MAXIMUM		19	11	34	30	8	6						
AVERAGE		19	6	12	5	1	1						
MINIMUM		19											
HOUSTON TEXAS	54												
NUMBER OF SAMPLES		1	2	3		3	8						
MAXIMUM		46	32	59		32	27						
AVERAGE		46	30	48		30	8						
MINIMUM		46	29	31		28							
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	3	2	4	2	3	1	2	3	2		2
MAXIMUM		1	53	50	7	35	64	31	24	21	26		
AVERAGE		1	31	47	3	30	41	31	23	19	25		
MINIMUM		1		44		26	22	31	23	18	25		
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	3	5	2	2					
MAXIMUM			40	108	6	8	18	22					
AVERAGE			40	48	6	4	11	21					
MINIMUM			40	17	6		4	20					
PASADENA CALIF	54 55												
NUMBER OF SAMPLES		2	4	2	3	2	3	4	2	2	4		
MAXIMUM			14	38	61	8		25	19		2		
AVERAGE			4	33	48	5		19	9		1		
MINIMUM				29	27	2		15					
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	4		1	2	2	3	2	3	4	5	4
MAXIMUM			16			4	16	4	4	5	5	1	
AVERAGE			4			2	8	2	2	4	2		
MINIMUM								1		3			
SAN JOSE CALIF	54 55												
NUMBER OF SAMPLES		3	4	2	1	2	2	2	2	4	3	5	3
MAXIMUM				3		5	4	3	3	16	5	5	
AVERAGE				2		2	2	2	1	5	4	2	
MINIMUM				1			1	2			3		

TABLE 22. TIN—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14		40	10		1	1	6	7	8	10	20	22
	1	56	22		10	3			1	1	1	3	4	7	9
	1	55 56	36		40	5			1	1	3	6	7	9	10
BOSTON MASS	1	55	23		30	2				1	1	1	1	1	7
EVERETT MASS	1	55	26		100	21		1	1	1	5	9	10	22	100
ELIZABETH N J	1	55 56	21		3					1	1	1	1	1	2
PAULSBORO N J	1	55 56	25		3						1	1	1	1	1
CAMDEN N J	1	55 56	21		11	1					1	1	1	1	2
PERTH AMBOY N J	1	55 56	23		18	2				1	1	1	1	2	8
TRENTON N J	1	55 56	17		2					1	1	1	1	1	1
JERSEY CITY N J	1	55 56	23		22	2				1	1	1	1	1	7
NEW YORK N Y	2	54 56	50		340	17	1	1	2	3	7	9	16	21	27
	3	54 55	25		17	3		1	1	1	2	3	4	6	8
		54 56	76		340	12	1	1	2	2	3	6	9	16	24
PHILADELPHIA PA	1	54	6		84	17			1	1	1	7	7	10	10
	1	55	94		99	8		1	3	4	5	6	8	13	20
	1	56	11		18	7	1	1	4	5	6	8	9	14	15
	1	54 56	111		99	8		1	3	4	5	6	9	14	19
	3	54	4		48	12				1	1	1	1	1	52
	4	56	11		510	62	1	1	5	5	10	10	25	59	67
	5	56	9		20	5		1	1	1	5	5	6	6	8
	6	56	11		130	16		1	1	1	6	7	7	15	17
	7	56	11		67	9			1	1	6	6	7	9	9
		54	10		84	15			1	1	1	1	7	10	52
		55	94		99	8		1	3	4	5	6	8	13	20
		56	53		510	20		1	1	5	6	7	8	14	25
		54 56	157		510	13		1	1	4	5	6	8	14	21
ALTOONA PA	1	56	13		6						1	1	1	1	4
BRISTOL PA	1	55 56	18		23	3				1	1	1	4	4	8
CHESTER PA	1	55 56	18		23	4			1	1	1	3	5	7	12
ERIE PA	1	56	25		20	3			1	1	1	3	4	5	8
PITTSBURGH PA	1	56	21		80	13	1	1	3	4	5	7	20	22	31
WILLIAMSPORT PA	1	55 56	23		10	2			1	1	1	3	4	4	7
WASHINGTON DC	1	54	26		16	3			1	1	1	3	4	6	6
	2	55 56	20		30	5			1	1	2	5	6	9	10
		54 56	46		30	4			1	1	1	3	5	6	9
LOUISVILLE KY	1	54	22		29	10	1	2	6	6	7	10	13	20	21
	1	55	21		20	6		1	1	1	6	6	10	12	15
	1	54 55	43		29	8		1	5	5	6	9	12	14	21
	2	54	13	5	30	9	4	5	5	5	8	8	9	10	22
	2	55	10		30	8		1	1	1	7	9	9	17	19
	2	54 55	23		30	9	1	4	5	5	8	9	9	10	22
	3	54	5		50	10			1	1	1	1	2	2	52
		54	40		50	10	1	[illegible]	5	5	7	9	10	20	22
		55	31		30	7		1	1	1	6	7	10	13	19
		54 55	71		50	8		1	4	5	6	8	10	15	21
BALTIMORE MD	1	57	18	3	10	5	3	3	4	4	4	5	5	6	7
CHARLESTON W VA	1	54	11		3					1	1	1	1	2	2
	4	55	16		100	6					1	1	1	1	1
		54 55	27		100	4					1	1	1	1	2
TAMPA FLA	1	54 55	31		9	1				1	1	1	1	3	4
ATLANTA GA	1	54 56	26		100	15		1	1	3	6	8	10	22	41
CHATTANOOGA TENN	3	55	14		25	6		1	1	3	4	4	8	10	19
	4	55 56	18		30	6	1	1	2	3	5	6	8	8	10
		55 56	32		30	6		1	2	3	4	5	7	10	19

TABLE 22. TIN—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
CHICAGO ILL	1	54	4		3	1				1	1	1	1	1	3
	1	55	28		100	16	1	5	8	9	9	10	20	21	22
	1	54 55	32		100	14	1	1	5	8	9	10	19	21	22
	2	54	30	1	40	8	3	4	4	5	6	7	9	10	17
	2	55	26		100	18	4	6	8	9	10	15	20	22	25
	2	54 55	56		100	13	3	4	6	7	9	10	10	20	22
	3	54	3		1						1	1	1	1	1
	4	55	29		100	22	1	5	7	9	10	21	30	32	52
		54	37		40	7	1	1	3	4	5	6	8	10	15
		55	83		100	19	1	6	7	9	10	19	21	25	41
		54 55	120		100	15	1	4	5	7	9	10	19	21	32
EAST ST LOUIS ILL	1	55 56	15		40	11	4	4	5	5	8	9	10	21	32
	2	55 56	14		10	2			1	1	1	3	4	4	9
		55 56	29		40	7		1	3	4	4	5	8	9	21
EAST CHICAGO IND	1	55 56	19		200	24	3	4	5	7	10	20	21	29	32
	2	55 56	26		60	22	5	7	9	10	20	22	30	38	41
	3	55 56	21		20	10	1	3	4	5	8	10	19	20	21
	4	55 56	20		80	17		1	3	4	5	9	20	22	67
		55 56	86		200	18	1	4	5	7	10	20	21	29	39
DETROIT MICH	1	53 54	32		80	4			1	1	1	2	3	5	8
CINCINNATI OHIO	1	54	73		115	7		1	1	2	3	4	5	6	17
	1	55	27		120	31	1	1	5	9	21	28	44	67	76
	1	54 55	100		120	14		1	1	3	4	5	8	21	46
	2	54	20		43	5			1	1	2	3	3	4	6
	4	54	22		12	1				1	1	1	1	2	3
	5	54	28		26	2				1	1	1	2	3	4
		54	143		115	5			1	1	1	2	3	5	10
		55	27		120	31	1	1	5	9	21	28	44	67	76
		54 55	170		120	9			1	1	2	3	5	9	29
YOUNGSTOWN OHIO	1	57	12	4	10	6	4	4	5	5	6	6	6	7	9
MILWAUKEE WIS	1	57	19	3	11	6	3	4	4	5	5	6	7	8	9
MINNEAPOLIS MINN	1	54 55	36		30	3				1	1	1	1	5	9
KANSAS CITY MO	2	54 56	25		60	4				1	1	1	1	4	7
	3	54	6								1	1	1	1	1
	4	55 56	9								1	1	1	1	1
		54 56	40		60	2					1	1	1	1	5
ST LOUIS MO	1	55 56	23		80	15	1	6	7	8	9	10	10	21	39
NEW ORLEANS LA	1	54 55	26		10	1			1	1	1	1	2	3	5
	2	54 55	24		4	1				1	1	1	1	3	3
		54 55	50		10	1				1	1	1	2	3	4
FT WORTH TEXAS	1	54 55	32		10						1	1	1	1	4
LAKEWORTH TEXAS	1	54	6		3						1	1	1	1	1
HOUSTON TEXAS	1	54	26		35	4			1	1	1	3	4	5	9
	1	55	56		90	12		1	1	2	5	7	10	21	41
	1	54 55	82		90	10			1	1	3	5	8	15	32
BELLAIRE TEXAS	1	54	21		20	5		1	2	4	4	5	5	9	10
	1	55	14		10	1				1	1	1	3	3	5
	1	54 55	35		20	3		1	1	1	3	4	5	5	10
DENVER COL	1	54 55	23		50	15	1	9	9	10	10	20	20	21	22
	3	54	3	2	3	2		2	2	2	3	3	3	3	3
		54 55	26		50	13	2	3	9	9	10	19	20	21	22
SALT LAKE CITY UTAH	2	54 55	31		70	10		1	3	5	6	8	9	20	21
ANCHORAGE ALASKA	1	54 55	42		7	1				1	1	1	1	2	5
LOS ANGELES CALIF		54	19		17	2				1	1	1	1	6	8
SAN FRANCISCO CALIF	1	55 56	32		60	2				1	1	1	1	1	3

TABLE 22. TIN—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
PASADENA CALIF	1	54	23		14	1				1	1	1	1	2	4
	1	55	21		6	2			1	1	2	3	3	4	5
	1	56	4		10	6		1	1	6	6	6	8	8	10
	1	54 56	48		14	2			1	1	1	2	3	4	5
BERKELEY CALIF	1	54 55	35		8	2			1	1	2	3	4	5	6
SAN JOSE CALIF	1	54	27		5						1	1	1	1	1
	1	55	12		11	3		1	1	2	2	2	3	5	5
	1	56	20		13	2				1	1	1	3	4	6
	1	54 56	59		13	1				1	1	1	1	3	5
SAN LEANDRO CALIF	1	55	8		50	14	1	7	7	8	9	10	10	10	22
	1	56	22		30	11	1	5	7	9	9	10	10	21	22
	1	55 56	30		50	12	1	5	7	9	9	10	10	21	22
PORTLAND OREGON	1	54	20		10	2			1	1	1	2	3	5	9
	1	55	19		30	5		1	1	3	4	4	5	7	9
	1	54 55	39		30	3			1	1	2	3	5	7	9
	2	54	15		16	2			1	1	1	1	2	2	12
	5	54	10		20	9	1	3	4	6	9	10	10	12	21
	4	54	10		14	4	1	1	3	3	4	4	6	6	7
		54	55		20	4		1	1	1	2	3	6	8	11
		55	19		30	5		1	1	3	4	4	5	7	9
		54 55	74		30	4		1	1	1	2	4	5	8	10
SEATTLE WASH	1	57	20		9	4	2	3	3	4	4	4	5	6	7

TABLE 22. TIN—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		40	5			1	1	3	6	7	9	10
MASSACHUSETTS TOTAL	55	49		100	12			1	1	1	4	7	10	32
NEW JERSEY TOTAL	55 56	130		22	1					1	1	1	1	2
NEW YORK TOTAL	54 56	76		340	12	1	1	2	2	3	6	9	16	24
PENNSYLVANIA TOTAL	54 56	275		510	9		1	1	2	4	5	7	10	20
DIS COLUMBIA TOTAL	54 56	46		30	4			1	1	1	3	5	6	9
KENTUCKY TOTAL	54 55	71		50	8		1	4	5	6	8	10	15	21
MARYLAND TOTAL	57	18	3	10	5	3	3	4	4	4	5	5	6	7
WEST VIRGINA TOTAL	54 55	27		100	4					1	1	1	1	2
FLORIDA TOTAL	54 55	31		9	1				1	1	1	1	3	4
GEORGIA TOTAL	54 56	26		100	15		1	1	3	6	8	10	22	41
TENNESSEE TOTAL	55 56	32		30	6		1	2	3	4	5	7	10	19
ILLINOIS TOTAL	54 56	149		100	14	1	3	4	6	8	9	10	21	31
INDIANA TOTAL	55 56	86		200	18	1	4	5	7	10	20	21	29	39
MICHIGAN TOTAL	53 54	32		80	4			1	1	1	2	3	5	8
OHIO TOTAL	54 57	182		120	9			1	1	2	4	5	8	28
WISCONSIN TOTAL	57	19	3	11	6	3	4	4	5	5	6	7	8	9
MINNESOTA TOTAL	54 55	36		30	3				1	1	1	1	5	9
MISSOURI TOTAL	54 56	63		80	7			1	1	1	4	7	9	21
LOUISIANA TOTAL	54 55	50		10	1				1	1	1	2	3	4
TEXAS TOTAL	54 55	155		90	6			1	1	1	3	5	8	20
COLORADO TOTAL	54 55	26		50	13	2	3	9	9	10	19	20	21	22
UTAH TOTAL	54 55	31		70	10		1	3	5	6	8	9	20	21
ALASKA TOTAL	54 55	42		7	1				1	1	1	1	2	5
CALIFORNIA TOTAL	54 56	224		60	3			1	1	1	2	3	5	9
OREGON TOTAL	54 55	74		30	4		1	1	1	2	4	5	8	10
WASHINGTON TOTAL	57	20		9	4	2	3	3	4	4	4	5	6	7
NEW ENGLND TOTAL	55 56	85		100	9			1	1	1	4	7	9	21
MID ATLNTC TOTAL	54 56	481		510	7			1	1	1	3	5	8	18
MID EAST TOTAL	54 57	162		100	6		1	1	1	4	5	6	9	17
SOUTH EAST TOTAL	54 56	89		100	7			1	1	3	4	5	9	20
MID WEST TOTAL	53 57	468		200	12		1	2	4	5	7	9	20	30
GRT PLAINS TOTAL	54 56	99		80	5			1	1	1	1	5	8	20
GULF SOUTH TOTAL	54 55	205		90	5			1	1	1	2	4	5	11
ROCKY MNTN TOTAL	54 55	57		70	11	1	2	5	7	9	9	19	21	22
PAC COAST TOTAL	54 57	360		60	3			1	1	1	2	4	5	9
GRAND TOTAL	53 57	2006		510	7			1	1	2	4	6	9	20

TABLE 22. TIN—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		30	3			1	1	1	2	3	4	7
LAKEHURST N J	1	55 56	19		3						1	1	1	1	1
KANAWHA CO W VA	1	54 55	23		6						1	1	1	1	3
HILLSBOROUGH CO FLA	1	54	4		2					1	1	1	1	1	2
FULTON CO GEORGIA	1	54	8		2						1	1	1	1	1
HAMILTON COUNTY OHIO	1	54 55	36		4					1	1	1	1	1	2
TONKA BAY MINN	1	54	9		1						1	1	1	1	1
DENVER COUNTY COLO	1	54 55	10		3					1	1	1	1	1	3
SALT LAKE CO UTAH	1	54	5								1	1	1	1	1
MULTNOMAH CNTY ORE	1	54	12		2					1	1	1	1	1	2
GRAND TOTAL		54 56	149		30					1	1	1	1	1	2
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12												

TABLE 22. TIN—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^3

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM			10	7	40	8	6	7	20		20	10	20
AVERAGE			5	1	9	4	2	2	7		10	6	15
MINIMUM											4		10
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		10	30						7		4	6	
AVERAGE		10	15						1		2	3	
MINIMUM		10											
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		100	9	20		10	20	100		10		100	100
AVERAGE		50	3	8		9	8	33		7		100	53
MINIMUM		10				9				4		100	7
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		1		2	2	1			1	2		1	3
AVERAGE				1		1				2		1	1
MINIMUM				1		1				2		1	
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM			1	3	1						1		
AVERAGE				1									
MINIMUM				1									
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		2	1	3				1	2	11			1
AVERAGE		1		1				1	1	3			
MINIMUM		1						1					
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		1		16	5						18	2	
AVERAGE				7	1						9	1	
MINIMUM				1								1	
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		1	2	2	2						1		1
AVERAGE			1	2	2						1		
MINIMUM				2	2						1		
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM			2	9	22		1		7				
AVERAGE			1	3	5				3				
MINIMUM			1	1									
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		4	6	5	8	5	10	7	5	6	6	7	7
MAXIMUM		340	27	23	20	17	29	27	17	32	22	8	44
AVERAGE		92	8	8	7	5	5	6	5	13	9	4	15
MINIMUM		2		1	2	2				1	2		
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		20	16	14	15	19	12	13	13	10	8	8	9
MAXIMUM		84	23	28	22	510	13	7	16	57	13	18	99
AVERAGE		12	9	10	5	40	6	2	5	12	6	5	29
MINIMUM											4		
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM						4					6		
AVERAGE						1					3		
MINIMUM													
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM				4				4		23	4	14	8
AVERAGE				4				2		5	2	9	4
MINIMUM				4								5	
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			4		7		12	3	23	18			
AVERAGE			4		5		6	1	9	6			
MINIMUM			4		3								
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		10		20	8		5			8	5	5	5
AVERAGE		4		10	4		5			3	1	4	1
MINIMUM							5					4	
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		6	5	30			20	5		20	30	80	8
AVERAGE		3	1	21			10	2		20	17	41	8
MINIMUM				4			4			20	4	3	8

TABLE 22. TIN—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) × 10^{3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			4		7	4		8		6		10	
AVERAGE			1		3	1		8		4		6	
MINIMUM								8		4		4	
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	6	1	5	6	6	4	7	6	3	1	
MAXIMUM			10		4	20	30	10	10	9	6		
AVERAGE			2			4	9	3	4	4	5		
MINIMUM							1	1			3		
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	6	4	4	13	13	12	6	1	6
MAXIMUM		10	20	20	9	1	50	30	18	22	20		30
AVERAGE		8	14	20	3		16	7	8	6	11		18
MINIMUM		7	6	20									6
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		6	5	10	9	4	5	4	5	5			
AVERAGE		6	4	8	6	4	4	4	4	5			
MINIMUM		6	4	6	4	4	3	4	4	5			
CHARLESTON W VA	54 55												
NUMBER OF SAMPLES			1	3	5	5	3	2	1	1	3	2	1
MAXIMUM				1	3	2				100			
AVERAGE					1					100			
MINIMUM										100			
TAMPA FLA	54 55												
NUMBER OF SAMPLES		2	2	4	5	5	2	2	[illegible]	3	1	2	1
MAXIMUM		3	6		1	3			4	9	4	5	
AVERAGE		1	3						3	3	4	2	
MINIMUM									3		4		
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	3	6	5	3	1	3	1		1	1	1
MAXIMUM		40	9	80	50	8		10	30		20	100	
AVERAGE		40	6	19	10	5		6	30		20	100	
MINIMUM		40	4			1		3	30		20	100	
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			25	10	3	30			6	8	20	10	8
AVERAGE			8	6	1	17			2	4	12	5	6
MINIMUM				3		4					4		4
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	12	20	14	9	8	16	13	8
MAXIMUM		10	70	100	20	70	40	40	20	100	100	30	22
AVERAGE		7	24	22	15	15	13	8	9	27	21	11	15
MINIMUM		4	6		5				2	3	5		8
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		5	4	40	6	9	20	30	9	20		6	9
AVERAGE		2	2	21	5	4	10	30	6	10		5	4
MINIMUM				3	4			30	5			4	
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		30	7	60	70	50	80	60	20	200	40	20	40
AVERAGE		9	3	19	25	27	29	13	14	41	23	6	11
MINIMUM					4	20		3	5	3	3		
DETROIT MICH	53 54												
NUMBER OF SAMPLES			1	3	4	2	1					21	
MAXIMUM				80	5		2					16	
AVERAGE				26	1		2					3	
MINIMUM							2						
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	8	52	20	22	19	8	9	12	8	3	6
MAXIMUM		10	7	90	43	70	100	73	50	115	120	41	30
AVERAGE		6	2	4	11	4	10	12	14	23	21	15	18
MINIMUM		1						1	1		2		5
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				5	9	7	4	7	7	5	10		
AVERAGE				5	7	7	4	6	6	5	8		
MINIMUM				5	5	7	4	6	6	5	6		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		8	10	8	11	8	5	7	5	9	4		
AVERAGE		6	7	6	7	6	5	6	4	7	4		
MINIMUM		4	5	4	5	5	5	6	3	5	4		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	4	4	5	4	3		5	4	3	2	1
MAXIMUM		20	5	5					10	5	30	20	9
AVERAGE		20	1	1					3	2	11	10	9
MINIMUM		20											9

TABLE 22. TIN—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	3	8	7	5	3	2	4	1	1	1	1
MAXIMUM			5	15	4		1		7				60
AVERAGE			1	1					3				60
MINIMUM													60
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		40	10		30	20	40	8	80	10	7	10	6
AVERAGE		25	7		20	15	24	4	36	10	7	8	3
MINIMUM		10	4		10	6	9		8	10	7	7	
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	6	6	6	4	4	4	5	3
MAXIMUM		3	4	3				3	4	8	5	5	10
AVERAGE		1	1	1				2	1	2	1	1	5
MINIMUM													3
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	3	4	4	5	2	2	2	2	2	2	2
MAXIMUM		5	5				4					10	4
AVERAGE		2	1				2					5	2
MINIMUM													
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES		1	7	9	5	8	14	7	3	6	6	9	7
MAXIMUM			60	50	5	20	20	50	20	90	70	14	35
AVERAGE			10	9	1	6	4	10	11	39	18	2	9
MINIMUM									5	9			
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	3	4	2	3	3	2	3	3	4	2	3
MAXIMUM		10		3		3		5	10	20	10	10	9
AVERAGE		6				1		5	6	9	6	5	6
MINIMUM		4						5	4	4	2		5
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		20	10	50	9	20	5	10	20	20	20	20	30
AVERAGE		15	9	35	4	15	2	10	15	14	20	20	25
MINIMUM		10	9	20		10		10	10	9	20	20	20
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		20	30	20	70	6	3	7	9	10	10	20	20
AVERAGE		11	14	13	35	3		3	7	9	8	13	15
MINIMUM		6	3	7					6	9	6	6	7
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	4	4	8	4	7	1	3	3	3	1	3
MAXIMUM		5	1		2		4	2	2	5	5	5	7
AVERAGE		5						2	1	3	2	5	4
MINIMUM		5						2		2		5	1
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES			1	4	4	6	2	2					
MAXIMUM			8	17	8	1	1						
AVERAGE			8	6	3								
MINIMUM			8										
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		3	3		60	3	4						
AVERAGE		2	1		60	1	2						
MINIMUM					60								
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		4	6	3	6	5	5	7	2	4	6		
MAXIMUM		10	6	4	4	3	2	6	4	5	14		
AVERAGE		5	2	1		1		2	2	3	3		
MINIMUM													
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	5		2	2	2	3	2	3	4	5	4
MAXIMUM		3	6		5	4	6	3	2	6	5	7	8
AVERAGE		1	2		2	2	3	1	1	3	2	1	5
MINIMUM						1	1			1			3
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	4	2	5	5	5	5	6	4	7	6
MAXIMUM		11	3			6	5	4	2	13		5	5
AVERAGE		3	1			2	1	1		3		1	2
MINIMUM													
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		20	20	9	4	6	30	30	10	10	20	50	
AVERAGE		12	20	4	4	6	20	13	7	10	16	16	
MINIMUM		7	20		4	6	10		5	10	10	7	
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	2	9	4	3		2	7	5	21	20	
MAXIMUM		10		6				8	30	9	20	20	
AVERAGE		10						5	7	3	5	5	
MINIMUM		10						3				1	
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		7	3	4	6	5	5	4	5	9	7		
AVERAGE		6	3	4	5	4	4	3	4	4	7		
MINIMUM		6	3	4	4	4	3	3	4		7		

TABLE 22. TIN—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		30	2	4			7	3		5			6
AVERAGE		18	2	2			3	1		1			3
MINIMUM		7	2										
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM		2		3	1								
AVERAGE		1		1									
MINIMUM													
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2	1	5	3	3	1		2	1	1
MAXIMUM			4								6		3
AVERAGE			1								3		3
MINIMUM													3
HAMILTON COUNRY OHIO	54 55												
NUMBER OF SAMPLES			1	4	2	5	3	4	4	4	4	3	2
MAXIMUM			2	2		2	1	2	4	3	2	3	1
AVERAGE			2						1	1		1	
MINIMUM			2									1	
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM										3			
AVERAGE										3			
MINIMUM										3			

TABLE 23. TITANIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	1	9	3	1	2	2	2	2	3	3	3	4
	1	56	22		10	3	1	1	2	2	2	3	4	5	7
	1	55 56	36		10	3	1	1	2	2	2	3	3	4	5
BOSTON MASS	1	55	23		20	2			1	1	1	1	1	2	3
EVERETT MASS	1	55	26		7	2		1	1	1	2	2	2	3	4
ELIZABETH N J	1	55 56	21		5	1					1	1	1	1	2
PAULSBORO N J	1	55 56	25		4	1			1	1	1	2	2	3	4
CAMDEN N J	1	55 56	21	1	5	2		1	1	1	2	2	3	4	4
PERTH AMBOY N J	1	55 56	23		61	3				1	1	1	1	2	4
TRENTON N J	1	55 56	17		6	1				1	1	1	1	2	4
JERSEY CITY N J	1	55 56	23		13	2		1	1	1	1	2	2	3	4
NEW YORK N Y	2	54	5		57	27	1	1	7	7	39	39	45	45	60
	2	55	42		61	11		1	1	2	3	4	12	24	39
	2	56	3	2	4	3		2	2	2	3	3	3	3	4
	2	54 56	50		61	12		1	1	2	3	4	13	25	41
	3	54 55	23		31	3		1	1	2	2	3	4	5	6
		54 56	73		61	9		1	1	2	3	4	5	14	37
PHILADELPHIA PA	1	54	6		68	32	1	1	7	7	26	45	45	60	60
	1	55	94	1	12	2		1	1	2	2	2	3	3	5
	1	56	11	1	4	2		1	1	2	3	3	4	4	4
	1	54 56	111		68	4		1	1	2	2	3	3	4	6
	3	54	4		35	12		1	1	1	1	1	16	16	39
	4	56	11		10	2			1	1	1	2	2	3	4
	5	56	9		4	2	1	1	2	2	2	2	2	3	3
	6	56	11	1	5	2		1	1	1	2	2	3	3	4
	7	56	11	1	7	2				1	1	1	2	2	5
		54	10		68	24		1	1	7	16	26	39	45	60
		55	94	1	12	2		1	1	2	2	2	3	3	5
		56	53		10	2		1	1	1	2	2	3	3	4
		54 56	157		68	4		1	1	1	2	2	3	4	6
ALTOONA PA	1	56	13		3	1				1	1	1	1	1	2
BRISTOL PA	1	55 56	18		5	1					1	1	1	1	1
CHESTER PA	1	55 56	18		5	2		1	1	1	2	3	3	3	4
ERIE PA	1	56	25		3						1	1	1	1	1
PITTSBURGH PA	1	56	21	1	6	2		1	1	2	2	3	3	3	4
WILLIAMSPORT PA	1	55 56	23		5	2		1	1	1	2	2	3	3	4
WASHINGTON DC	1	54	26		98	13			1	1	1	1	4	20	45
	2	55 56	20	1	7	3	1	1	1	2	2	2	3	4	5
		54 56	46		98	8			1	1	2	2	3	5	20
LOUISVILLE KY	1	54	20		15	5		1	2	3	3	5	6	6	14
	1	55	21	1	13	5	1	2	2	3	4	5	7	9	9
	1	54 55	41		15	5	1	1	2	3	4	5	6	8	12
	2	54	13	1	4	1		1	1	1	1	2	2	2	3
	2	55	10	1	4	2	1	1	1	2	2	2	3	3	4
	2	54 55	23	1	4	2		1	1	1	2	2	2	3	3
	3	54	3		1						1	1	1	1	1
		54	36		15	3		1	1	1	2	3	3	5	6
		55	31	1	13	4	1	1	2	2	3	4	5	7	9
		54 55	67		15	3		1	1	2	2	3	4	6	9
BALTIMORE MD	1	57	18	2	33	9	3	5	6	7	8	8	9	11	12
CHARLESTON W VA	1	54	11	5	106	32	5	6	6	7	18	20	26	74	79
	4	55	16		30	10	1	2	4	4	8	10	10	19	20
		54 55	27		106	19	2	4	5	7	10	14	19	20	30
TAMPA FLA	1	54 55	28		9						1	1	1	1	1
ATLANTA GA	1	54 56	22	1	55	8	1	2	3	3	4	4	6	9	18
CHATTANOOGA TENN	3	55	14		11	2			1	1	1	1	2	3	4
	4	55 56	18		4	1		1	1	1	2	2	2	2	3
		55 56	32		11	2			1	1	1	2	2	3	3

TABLE 23. TITANIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
CHICAGO ILL	1	54	3		62	26		1	1	1	18	18	18	18	69
	1	55	28		8	2			1	1	1	2	3	3	4
	1	54 55	31		62	4			1	1	1	2	3	4	5
	2	54	29		58	10		1	1	1	3	3	8	10	42
	2	55	26		51	4		1	1	2	2	3	4	5	6
	2	54 55	55		58	7		1	1	2	2	3	5	8	16
	3	54	3		29	13		1	1	1	12	12	12	12	30
	4	55	29		4	1			1	1	1	1	2	2	3
		54	35		62	11		1	1	1	3	6	10	16	45
		55	83		51	2			1	1	1	2	2	3	4
		54 55	118		62	5			1	1	2	2	3	4	9
EAST ST LOUIS ILL	1	55 56	15	1	10	4	2	2	3	3	3	4	4	5	8
	2	55 56	14	1	5	2		1	1	2	2	2	3	3	4
		55 56	29	1	10	3	1	1	2	2	3	3	3	4	5
EAST CHICAGO IND	1	55 56	19		30	6	1	2	3	3	4	4	5	8	10
	2	55 56	26	1	29	7	1	2	2	3	4	5	5	12	16
	3	55 56	21	1	15	4	1	1	1	2	3	4	4	5	8
	4	55 56	20		16	3		1	1	2	2	3	3	4	5
		55 56	86		30	5	1	1	2	2	3	4	5	7	14
DETROIT MICH	1	53	16	1	105	34	3	4	7	7	12	39	56	65	69
	1	54	5	37	108	59	39	39	49	49	52	52	60	60	119
	1	53 54	21	1	108	40	3	6	7	12	39	52	57	65	104
CINCINNATI OHIO	1	54	64		71	6			1	1	1	2	3	4	22
	1	55	27	1	70	7	1	1	2	2	2	3	3	4	5
	1	54 55	91		71	6			1	1	2	3	3	4	20
	2	54	11		51	10			1	1	1	5	12	18	34
	4	54	8		20	4		1	1	1	1	3	4	4	8
	5	54	13		65	19		1	1	8	16	18	23	30	52
		54	96		71	8			1	1	1	3	4	12	25
		55	27	1	70	7	1	1	2	2	2	3	3	4	5
		54 55	123		71	8			1	1	2	3	4	10	25
YOUNGSTOWN OHIO	1	57	12	3	29	13	3	7	10	10	12	15	15	18	23
MILWAUKEE WIS	1	57	19	4	38	12	4	5	7	9	10	12	13	15	23
MINNEAPOLIS MINN	1	54	15		72	16			1	1	1	3	30	39	69
	1	55	20		4	2		1	1	1	2	2	2	3	3
	1	54 55	35		72	8		1	1	1	2	2	3	4	39
KANSAS CITY MO	2	54 56	25		60	8		1	1	1	2	2	3	4	39
	3	54	4		39	26		1	1	34	34	34	37	37	39
	4	55 56	9		4	1			1	1	1	1	1	2	2
		54 56	38		60	8		1	1	1	2	2	3	4	36
ST LOUIS MO	1	55 56	23		30	3		1	1	1	2	2	3	3	5
NEW ORLEANS LA	1	54 55	26		1						1	1	1	1	1
	2	54 55	24		1						1	1	1	1	1
		54 55	50		1						1	1	1	1	1
FT WORTH TEXAS	1	54 55	27		518	19					1	1	1	1	1
LAKEWORTH TEXAS	1	54	3		29	9		1	1	1	1	1	1	1	30
HOUSTON TEXAS	1	54	23		86	23	1	2	4	5	8	20	26	39	74
	1	55	56		5	1			1	1	1	1	2	2	3
	1	54 55	79		86	8			1	1	1	2	3	5	23
BELLAIRE TEXAS	1	54	20		12	3			1	1	1	2	2	3	8
	1	55	14		4	1				1	1	1	1	2	3
	1	54 55	34		12	2			1	1	1	1	2	2	6
DENVER COL		54 55	26	1	24	5	1	2	2	3	3	4	5	7	10
SALT LAKE CITY UTAH	2	54 55	31		66	10	1	5	6	8	9	9	10	10	19
ANCHORAGE ALASKA	1	54	31		750	114	1	7	20	52	91	119	143	179	235
	1	55	10		47	11		1	1	2	3	5	10	18	34
	1	54 55	41		750	89	1	2	7	18	49	85	119	149	220

TABLE 23. TITANIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
LOS ANGELES CALIF	1	54	12		102	53	1	8	30	39	45	60	79	91	98
	2	54	3		28	9		1	1	1	1	1	1	1	30
		54	15		102	44	1	1	26	28	39	45	79	85	98
SAN FRANCISCO CALIF	1	55 56	32		4						1	1	1	1	1
PASADENA CALIF	1	54	23		131	33	1	4	12	20	26	34	42	52	74
	1	55	21		27	4		1	1	2	3	3	4	5	6
	1	56	4		10	5		1	1	5	5	5	6	6	10
	1	54 56	48		131	18	1	1	2	3	5	10	22	30	52
BERKELEY CALIF	1	54 55	33		40	5		1	1	1	2	3	4	5	12
SAN JOSE CALIF	1	54	25		24	4	1	1	3	3	4	5	6	7	8
	1	55	12		22	4		1	1	3	3	4	4	5	8
	1	56	20	1	10	4	1	2	3	3	4	4	5	6	8
	1	54 56	57		24	4	1	1	2	3	4	4	5	7	8
SAN LEANDRO CALIF	1	55 56	30	1	5	1		1	1	1	1	2	2	2	3
PORTLAND OREGON	1	54	20		54	19	1	1	3	4	7	14	36	39	45
	1	55	19		7	3	1	1	2	3	3	3	4	4	5
	1	54 55	39		54	11	1	1	2	3	4	4	6	14	39
	2	54	15		66	18	1	3	5	9	12	14	20	26	52
	5	54	10		15	7	1	3	5	6	8	9	10	10	12
	4	54	10	1	9	5	1	1	3	5	5	7	8	8	9
		54	55		66	14	1	2	4	6	8	9	13	26	43
		55	19		7	3	1	1	2	3	3	3	4	4	5
		54 55	74		66	11	1	2	3	4	5	7	9	14	39
SEATTLE WASH	1	57	20	5	37	14	6	7	8	9	15	16	17	18	20

TABLE 23. TITANIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36		10	3	1	1	2	2	2	3	3	4	5
MASSACHUSETTS TOTAL	55	49		20	2			1	1	1	1	2	2	4
NEW JERSEY TOTAL	55 56	130		61	2			1	1	1	1	2	3	4
NEW YORK TOTAL	54 56	73		61	9		1	1	2	3	4	5	14	17
PENNSYLVANIA TOTAL	54 56	275		68	3			1	1	1	2	3	3	4
DIS COLUMBIA TOTAL	54 56	46		98	8			1	1	2	2	3	5	20
KENTUCKY TOTAL	54 55	67		15	3		1	1	2	2	3	4	6	9
MARYLAND TOTAL	57	18	2	33	9	3	5	6	7	8	8	9	11	12
WEST VIRGINA TOTAL	54 55	27		106	19	2	4	5	7	10	14	19	20	30
FLORIDA TOTAL	54 55	28		9						1	1	1	1	1
GEORGIA TOTAL	54 56	22	1	55	8	1	2	3	3	4	4	6	9	18
TENNESSEE TOTAL	55 56	32		11	2			1	1	1	2	2	3	3
ILLINOIS TOTAL	54 56	147		62	5		1	1	1	2	2	3	4	9
INDIANA TOTAL	55 56	66		30	5	1	1	2	2	3	4	5	7	14
MICHIGAN TOTAL	53 54	21	1	108	40	3	6	7	12	39	52	57	65	104
OHIO TOTAL	54 57	135		71	8		1	1	1	2	3	5	12	25
WISCONSIN TOTAL	57	19	4	38	12	4	5	7	9	10	12	13	15	23
MINNESOTA TOTAL	54 55	35		72	8		1	1	1	2	2	3	4	39
MISSOURI TOTAL	54 56	61		60	6		1	1	1	2	2	3	4	50
LOUISIANA TOTAL	54 55	50		1						1	1	1	1	1
TEXAS TOTAL	54 55	143		518	8			1	1	1	1	2	3	11
COLORADO TOTAL	54 55	26	1	24	5	1	2	2	3	3	4	5	7	10
UTAH TOTAL	54 55	31		66	10	1	5	6	8	9	9	10	10	19
ALASKA TOTAL	54 55	41		750	89	1	2	7	18	49	85	119	149	220
CALIFORNIA TOTAL	54 56	215		131	9		1	1	1	2	3	5	7	28
OREGON TOTAL	54 55	74		66	11	1	2	3	4	5	7	9	14	19
WASHINGTON TOTAL	57	20	5	37	14	6	7	8	9	15	16	17	18	20
NEW ENGLND TOTAL	55 56	85		20	2		1	1	1	2	2	3	3	5
MID ATLNTC TOTAL	54 56	478		68	3			1	1	1	2	3	3	5
MID EAST TOTAL	54 57	158		106	8		1	1	2	3	5	6	9	19
SOUTH EAST TOTAL	54 56	82		55	3			1	1	1	2	2	3	7
MID WEST TOTAL	53 57	408		108	8		1	1	2	3	3	5	10	21
GRT PLAINS TOTAL	54 56	96		72	7		1	1	1	2	2	3	4	30
GULF SOUTH TOTAL	54 55	193		518	6				1	1	1	1	2	6
ROCKY MNTN TOTAL	54 55	57		66	8	1	2	3	4	6	8	9	10	19
PAC COAST TOTAL	54 57	350		750	19		1	1	2	4	5	9	20	48
GRAND TOTAL	53 57	1907		750	8		1	1	1	2	3	4	7	18

TABLE 23. TITANIUM—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		2						1	1	1	1	1
LAKEHURST N J	1	55 56	19		5						1	1	1	1	1
KANAWHA CO W VA	1	54 55	23		17	3			1	1	1	2	4	5	8
HILLSBOROUGH CO FLA	1	54	4	5	20	11		5	5	8	8	8	14	14	20
FULTON CO GEORGIA	1	54	4	10	40	19		10	10	12	12	12	18	18	45
HAMILTON COUNTY OHIO	1	54 55	29		26	2				1	1	1	1	2	7
TONKA BAY MINN	1	54	9		22	2				1	1	1	1	1	1
DENVER COUNTY COLO	1	54 55	10	1	5	2	1	1	1	1	2	2	2	4	5
SALT LAKE CO UTAH	1	54	4		61	15				1	1	1	1	1	69
MULTNOMAH CNTY ORE	6	54	12		9	3			1	1	2	3	3	6	9
GRAND TOTAL		54 56	137		61	3				1	1	1	1	4	9
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12	1	10	3	1	1	1	1	3	3	4	5	5

TABLE 23. TITANIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		3	4	5	2	3	2	4	9	5	7	10	8
AVERAGE		1	3	2	2	2	1	3	5	5	4	5	5
MINIMUM			3	2	2	2	1	3	3	5	2	2	3
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		3	2	20		1	1	10	2	2	2	2	2
AVERAGE		3	1	5		1		5		2	1	1	2
MINIMUM		3	1			1		1		2	1	1	2
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		3	7	4	1	5	2	4	2	2	2	2	3
AVERAGE		2	3	3	1	4	1	2	1	1	2	2	2
MINIMUM		1		2	1	4	1	1		1	2	2	2
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		1		2	2				1	1		1	5
AVERAGE				1	1					1		1	3
MINIMUM				1	1					1		1	1
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		4	4	4	3	2	1	1	1		3		
AVERAGE		3	3	2	1	1	1		1		1		
MINIMUM		3	2	2	1		1		1				
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		2	5	4	5		1	2	2	2	4		4
AVERAGE		2	3	3	3		1	2	1	1	4		3
MINIMUM		2	2	3	1		1	2	1	1	4		2
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		3	1	2	61				1		1	4	3
AVERAGE		1	1	1	13				1		1	1	2
MINIMUM			1	1					1		1		1
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		1	4	1	6			1	1		5	1	2
AVERAGE		1	2	1	6			1	1		5	1	1
MINIMUM		1	1	1	6			1	1		5	1	1
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		2	4	9	13		2	1	3	1		1	3
AVERAGE		1	3	4	4		2		2	1		1	2
MINIMUM		1	2	2	1		2		1	1		1	1
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		4	4	4	8	5	10	7	5	6	6	7	7
MAXIMUM		45	3	37	24	41	34	14	4	61	26	57	40
AVERAGE		13	1	19	9	8	4	4	2	24	8	10	12
MINIMUM		1	1	2	1					2	2		
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		20	16	14	15	19	12	13	13	10	8	8	9
MAXIMUM		68	53	8	26	10	5	4	6	8	4	4	9
AVERAGE		8	8	2	3	3	2	1	2	3	2	2	3
MINIMUM			1	1			1		1	1	1	1	1
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			1	1	1	3			1		2	1	
AVERAGE			1	1	1	1			1		1	1	
MINIMUM			1	1	1				1			1	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			2	1		1		5		1	1	1	1
AVERAGE			2	1				3		1	1	1	1
MINIMUM			2	1				1		1	1	1	1
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			3		2	1	1	4	5	5			4
AVERAGE			3		2		1	2	3	3			4
MINIMUM			3		2		1	1	1	3			4
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		1		1	2		1			1	3	1	1
AVERAGE							1				1	1	
MINIMUM							1					1	
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		3	3	5			4	1		3	3	6	3
AVERAGE		1	1	4			2	1		2	3	4	3
MINIMUM		1	1	3			1	1		2	3	3	3
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			5	3	4	4		1	3	3	1	3	3
AVERAGE			3	3	3	2		1	3	2		2	2
MINIMUM			2	3	3	1		1	3	2		1	1

TABLE 23. TITANIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	6	1	5	6	6	4	7	6	3	1	
MAXIMUM		5	6	3	87	98	48	2	2	3	3	3	
AVERAGE		5	4	3	27	18	19				1	3	
MINIMUM		5	3	3	2							3	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	2	4	4	13	13	12	6	1	6
MAXIMUM		2	5	7	4	7	13	11	9	15	9	3	15
AVERAGE		1	3	7	2	1	5	4	3	4	4	3	4
MINIMUM		1	2	7				1	1	1	2	3	1
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		6	12	14	12	2	9	8	33	7			
AVERAGE		6	10	10	7	2	8	6	16	7			
MINIMUM		6	9	7	3	2	8	4	6	7			
CHARLESTON W VA	54 55												
NUMBER OF SAMPLES			1	3	5	5	3	2	1	1	3	2	1
MAXIMUM			20	19	106	25	74	9	10	20	20	1	30
AVERAGE			20	9	40	15	32	6	10	20	9		30
MINIMUM			20	4	6	8	4	4	10	20	2		30
TAMPA FLA	54 55												
NUMBER OF SAMPLES		2	2	1	5	5	2	2	2	3	1	2	1
MAXIMUM		1	9		1	1			1	1	1		
AVERAGE			5						1		1		
MINIMUM			1						1		1		
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	2	4	4	3	1	3	1		1	1	1
MAXIMUM		8	55	6	23	18	3	3	3		9	7	5
AVERAGE		8	29	4	10	8	3	1	3		9	7	5
MINIMUM		8	4	3	2	2	3	1	3		9	7	5
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			11	2	3	4		3	2	3	3	2	4
AVERAGE			2	1	2	3		3	1	2	2	1	2
MINIMUM				1	1	3		3	1	1	1	1	1
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	10	20	14	9	8	16	13	8
MAXIMUM		1	51	3	5	18	62	9	5	9	9	16	42
AVERAGE			10	2	3	4	14	1	1	2	2	3	10
MINIMUM			1		1								
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		5	3	10	8	4	4	6	3	4	1	5	4
AVERAGE		2	2	6	5	2	3	6	2	2	1	3	3
MINIMUM		1	1	3	3	1	3	6	2	1	1	2	3
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		5	20	14	13	16	20	30	29	4	5	3	4
AVERAGE		3	4	5	7	10	11	8	8	2	3	2	1
MINIMUM		1	1	2	4	4	3	1	2	1	1		
DETROIT MICH	53 54												
NUMBER OF SAMPLES				1	2	1	1					16	
MAXIMUM				37	108	51	53					105	
AVERAGE				37	78	51	53					34	
MINIMUM				37	48	51	53					1	
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	5	30	10	10	19	8	9	12	8	3	6
MAXIMUM		57	20	65	71	22	5	3	4	4	6	70	10
AVERAGE		20	7	15	23	2			1	2	2	25	4
MINIMUM		1	4								1	2	1
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				10	18	10	3	16	29	7	21		
AVERAGE				10	13	10	3	15	22	7	16		
MINIMUM				10	8	10	3	15	16	7	12		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		13	21	16	38	15	4	10	7	14	13		
AVERAGE		11	13	10	26	9	4	7	7	12	13		
MINIMUM		10	5	5	9	4	4	4	7	11	13		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	3	4	5	4	3		5	4	3	2	1
MAXIMUM		4	4	72	36		2		4	3	3	4	2
AVERAGE		4	2	44	13		1		1	2	1	2	2
MINIMUM		4		2					1	2		1	2
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	2	8	6	5	3	2	4	1	1	1	1
MAXIMUM		4	3	60	31	1	3	1	5	2		2	2
AVERAGE		2	3	29	8		1	1	2	2		2	2
MINIMUM		1	3	2				1	1	2		2	2

TABLE 23. TITANIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^3

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		6	4		5	2	3	2	30	3	3	2	4
AVERAGE		3	3		4	1	2	1	11	3	3	1	3
MINIMUM		1	2		3	1	1		2	3	3	1	3
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	6	6	6	4	4	4	5	3
MAXIMUM			1			1	1	1	1	1	1	1	1
AVERAGE													
MINIMUM													
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	2	3	2	4	2	2	2	2	2	2	2
MAXIMUM		1	1	518	1		1				1	1	3
AVERAGE		1	1	173			1				1		1
MINIMUM		1	1				1				1		
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES		1	5	8	5	8	14	7	3	6	6	9	7
MAXIMUM		5	3	61	77	45	86	8	2	5	4	1	7
AVERAGE		5	1	13	17	12	18	3	1	2	1	1	2
MINIMUM		5	1		1	1				1		1	
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	3	3	2	3	3	2	3	3	4	2	3
MAXIMUM		3	4	2	1	1		11	12	2	2	2	3
AVERAGE		2	2	1	1			8	7	1	1	1	2
MINIMUM		1		1	1			6	1	1	1	1	2
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		2	2	10	20	4	24	7	5	3	4	10	6
AVERAGE		2	1	7	12	3	10	5	3	2	4	10	4
MINIMUM		2	1	5	5	3	2	4	2	2	4	10	3
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		9	66	20	10	20	10	9	10	20	10	10	20
AVERAGE		7	31	13	9	12	3	7	9	14	10	10	11
MINIMUM		4	8	6	9	5		6	8	8	10	10	5
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	4	3	8	4	7	1	3	3	3	1	3
MAXIMUM		3	33	48	750	257	235	233	168	138	130	7	37
AVERAGE		3	11	17	182	99	94	233	89	96	67	7	12
MINIMUM		3			1		10	233	10	70	4	7	
LOS ANGELES CALIF	54												
NUMBER OF SAMPLES				3	3	5	2	2					
MAXIMUM				102	91	40	73	55					
AVERAGE				94	42	21	36	40					
MINIMUM				85	8			25					
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		4	1	1	1	1	1	1	1	1	1	1	1
AVERAGE		2			1	1	1						1
MINIMUM		1			1	1	1						1
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		4	6	3	6	5	5	7	2	4	6		
MAXIMUM		6	27	12	69	42	36	70	18	71	131		
AVERAGE		3	7	6	26	9	18	20	9	21	45		
MINIMUM				2	1		2	3	1	4	3		
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	3		2	2	2	3	2	3	4	5	4
MAXIMUM		4	11		21		40	30	2	4	5	5	3
AVERAGE		1	6		14		20	11	2	3	3	2	1
MINIMUM					7			2	2	2			
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	2	2	5	5	5	5	6	4	7	6
MAXIMUM		8	22	2	24	4	4	9	8	10	8	6	8
AVERAGE		5	6	1	12	2	2	5	6	5	4	3	4
MINIMUM		4	1	1				4	3	3	3		
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		2	1	2	1	2	3	3	2	2	3	5	1
AVERAGE		1	1	1	1	2	3	2	2	2	2	2	1
MINIMUM		1	1	1	1	2	3	2	2	2	2	1	1
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	2	9	4	3		2	7	5	21	20	
MAXIMUM		4	38	50	54			5	6	7	43	66	
AVERAGE		4	38	21	28			4	3	3	6	13	
MINIMUM		4	38		1			4	1	1			
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		18	20	17	8	37	17	16	15	9	13		
AVERAGE		17	13	17	7	23	17	15	10	7	13		
MINIMUM		16	6	17	7	8	17	15	5	6	13		

TABLE 23. TITANIUM— SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		2	1	2		1	1	1	1	1	1	1	1
AVERAGE		1	1	1		1		1			1		1
MINIMUM		1	1	1		1		1			1		1
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM				5	2	1				1		1	
AVERAGE				2									
MINIMUM													
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2	1	5	3	3	1		2	1	1
MAXIMUM			8	5	6	17	1	3	4		5		
AVERAGE			3	3	6	7		1	4		3		
MINIMUM				2	6			1	4		1		
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	3		1	3	4	4	4	4	3	2
MAXIMUM				26					17	2		1	2
AVERAGE				13					4	2			1
MINIMUM				7									
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			1	2	4			5		2	2	5	2
AVERAGE			1	2	4			5		2	1	5	2
MINIMUM			1	2	4			5		2	1	5	2
NONURBAN													
PT ROMANZOF ALASKA	55 56												
NUMBER OF SAMPLES		1		1	1	2		1	2	1	1	1	1
MAXIMUM		1		1	1	5		4	5	3	3	10	1
AVERAGE		1		1	1	4		4	3	3	3	10	1
MINIMUM		1		1	1	4		4	1	3	3	10	1

TABLE 24. VANADIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	30	100	72	29	32	43	77	83	89	94	96	101
	1	56	22	30	300	98	43	50	67	71	75	89	95	103	201
	1	55 56	36	30	300	88	32	47	65	70	77	90	94	99	103
BOSTON MASS	1	55	23	2	300	96	6	32	48	63	91	95	99	103	203
EVERETT MASS	1	55	26	4	300	86	7	10	31	40	67	77	94	101	210
ELIZABETH N J	1	55 56	21		180	57	5	16	18	40	48	54	63	77	166
PAULSBORO N J	1	55 56	25	3	234	42	4	5	10	15	30	35	45	48	149
CAMDEN N J	1	55 56	21	6	120	30	10	11	13	16	21	24	40	47	58
PERTH AMBOY N J	1	55 56	23		120	29	3	8	11	12	18	24	40	50	77
TRENTON N J	1	55 56	17	3	140	33	5	5	7	11	18	26	37	54	58
JERSEY CITY N J	1	55 56	23	22	600	120	24	43	67	82	89	114	124	133	243
NEW YORK N Y	2	54 56	50		572	210	16	63	83	142	182	249	281	325	478
	3	54 55	25	4	998	362	103	189	210	281	314	350	433	578	720
		54 56	76		998	257	20	74	137	182	235	281	315	414	531
PHILADELPHIA PA	1	54	6	1	465	246	1	1	89	89	158	375	375	467	467
	1	55	94	6	260	57	13	23	30	36	41	49	61	77	111
	1	56	11	10	170	52	10	18	24	28	32	58	67	77	89
	1	54 56	111	1	465	66	13	23	30	36	42	53	66	87	137
	3	54	4		242	64		1	1	7	7	7	9	9	243
	4	56	11	5	280	70	5	18	28	37	45	48	50	103	158
	5	56	9	4	46	20	4	5	8	18	21	21	23	24	37
	6	56	11	20	160	71	21	28	32	37	67	77	108	114	119
	7	56	11		84	17	1	3	4	6	11	12	17	18	26
		54	10		465	173	1	1	7	9	89	158	243	375	467
		55	94	6	260	57	13	23	30	36	41	49	61	77	111
		56	53		280	47	5	11	17	23	29	37	50	72	114
		54 56	157		465	61	10	17	25	31	39	47	61	85	119
ALTOONA PA	1	56	13		3	1			1	1	1	1	1	2	2
BRISTOL PA	1	55 56	18	2	55	17	2	3	5	7	8	18	24	28	37
CHESTER PA	1	55 56	18	4	160	25	7	8	10	11	12	15	21	28	43
ERIE PA	1	56	25		2						1	1	1	1	1
PITTSBURGH PA	1	56	21		7	2	1	1	1	1	2	2	2	3	3
WILLIAMSPORT PA	1	55 56	23		10	4	1	2	3	3	4	4	6	7	9
WASHINGTON DC	1	54	26		27	3				1	1	1	1	6	15
	2	55 56	18	16	200	75	29	32	50	77	82	87	92	95	100
		54 56	44		200	33			1	1	10	21	50	82	95
LOUISVILLE KY	1	54	21		25	6	1	1	2	3	3	6	6	7	18
	1	55	21		23	5	2	2	2	3	3	4	6	8	12
	1	54 55	42		25	5	1	2	2	3	3	4	6	7	17
	2	54	13		3					1	1	1	1	2	3
	2	55	10		4	2		1	1	2	2	3	3	3	4
	2	54 55	23		4	1			1	1	1	2	2	3	3
	3	54	5		2				1	1	1	1	2	2	2
		54	39		25	3		1	1	1	2	2	3	6	7
		55	31		23	4	1	2	2	2	3	3	4	6	8
		54 55	70		25	4		1	1	2	2	3	3	6	8
BALTIMORE MD	1	57	16	42	430	133	50	67	77	89	98	137	166	174	210
CHARLESTON W VA	1	54	7		60	11			1	1	2	2	7	9	9
	4	55	16		20	7	1	2	4	5	6	9	9	10	10
		54 55	23		60	8		1	2	4	6	8	9	10	20
TAMPA FLA	1	54 55	27		94	6	1	1	1	1	2	2	3	4	5
ATLANTA GA	1	54 56	19		380	22		1	1	1	2	2	2	3	6
CHATTANOOGA TENN	3	55	14		40	4		1	1	1	1	2	2	2	3
	4	55 56	18		3	1		1	1	1	1	1	2	2	2
		55 56	32		40	2		1	1	1	1	1	2	2	3

TABLE 24. VANADIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10³ MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT 10	20	30	40	50	60	70	80	90
CHICAGO ILL	1	54	4		2					1	1	1	1	1	2
	1	55	28		50	13	2	4	5	7	9	10	19	20	30
	1	54 55	32		50	11	1	2	4	6	8	9	10	20	30
	2	54	30		54	3				1	1	1	1	1	9
	2	55	26		90	18	1	2	4	8	9	10	10	32	43
	2	54 55	56		90	10			1	1	1	6	9	10	32
	3	54	3		4	1		1	1	1	1	1	1	1	4
	4	55	29		10	4	1	1	2	2	3	5	7	8	8
		54	37		54	2				1	1	1	1	2	6
		55	83		90	11	1	2	3	5	7	9	9	18	31
		54 55	120		90	9		1	1	2	4	7	9	10	21
EAST ST LOUIS ILL	1	55 56	15	2	7	3	2	2	2	3	3	3	4	4	6
	2	55 56	14		6	2		1	1	2	2	2	3	3	4
		55 56	29		7	2	1	1	2	2	3	3	3	4	4
EAST CHICAGO IND	1	55 56	19		40	13	2	7	8	9	9	10	10	20	30
	2	55 56	26		100	19	1	1	3	6	8	12	20	32	47
	3	55 56	21	2	140	31	3	4	7	8	10	20	43	48	67
	4	55 56	20		40	10	1	1	2	3	5	6	10	20	32
		55 56	86		140	18	1	2	5	7	9	10	19	30	44
DETROIT MICH	1	53 54	25		210	28	1	1	1	2	3	4	10	15	119
CINCINNATI OHIO	1	54	56		10						1	1	1	1	2
	1	55	27		154	7	1	1	1	2	2	2	2	3	3
	1	54 55	83		154	2				1	1	1	1	2	3
	2	54	9		15	3		1	1	1	1	1	2	2	6
	4	54	7		2	1			1	1	1	1	2	2	2
	5	54	14		10	3		1	1	1	2	2	2	6	8
		54	86		15	1				1	1	1	1	2	5
		55	27		154	7	1	1	1	2	2	2	2	3	3
		54 55	113		154	2			1	1	1	1	2	2	4
YOUNGSTOWN OHIO	1	57	12		16	7	1	4	5	6	7	7	7	10	13
MILWAUKEE WIS	1	57	19	5	48	20	6	8	9	10	13	18	21	39	43
MINNEAPOLIS MINN	1	54 55	33		30	5		1	1	1	2	4	6	7	10
KANSAS CITY MO	2	54 56	23		40	8		1	2	3	5	6	10	10	21
	3	54	3		6	2		1	1	1	1	1	1	1	6
	4	55 56	9		9	2		1	1	1	1	1	2	2	4
		54 56	35		40	6		1	1	2	3	4	6	10	15
ST LOUIS MO	1	55 56	23		20	4	1	1	2	2	2	3	4	6	9
NEW ORLEANS LA	1	54 55	26		8	2			1	1	1	2	2	4	5
	2	54 55	24		6					1	1	1	1	2	3
		54 55	50		8	1			1	1	1	1	2	3	4
FT WORTH TEXAS	1	54 55	29		6						1	1	1	1	2
LAKEWORTH TEXAS	1	54	4		39	12		1	1	3	3	3	6	6	43
HOUSTON TEXAS	1	54	20		6	1			1	1	1	1	2	3	5
	1	55	56		7	2			1	1	2	2	3	3	4
	1	54 55	76		7	1			1	1	1	2	3	3	4
BELLAIRE TEXAS	1	54	20		10	3	1	1	1	1	2	2	3	5	8
	1	55	14	2	10	5	2	3	3	4	4	5	5	6	9
	1	54 55	34		10	4	1	1	2	2	3	4	5	6	9
DENVER COL	1	54 55	23		7	3	1	2	2	2	3	3	3	4	6
SALT LAKE CITY UTAH	2	54 55	31		40	6	1	2	3	4	5	6	7	8	10
ANCHORAGE ALASKA	1	54 55	40		63	6		1	1	1	2	3	9	10	12
LOS ANGELES CALIF		54	14		110	10				1	1	1	2	2	21
SAN FRANCISCO CALIF	1	55 56	32		20	3			1	1	1	2	2	5	8
PASADENA CALIF	1	54	18		15	2				1	1	1	2	3	4
	1	55	21		20	5		1	3	4	5	6	6	8	9
	1	56	4	2	70	43		2	2	47	47	47	50	50	77
	1	54 56	43		70	7		1	1	1	3	5	6	8	15

TABLE 24. VANADIUM—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^3											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
BERKELEY CALIF	1	54 55	34		30	4			1	1	1	2	4	8	10
SAN JOSE CALIF	1	54	25		14	2				1	1	1	2	4	7
	1	55	12		7	1			1	1	1	1	1	5	5
	1	56	20	2	11	5	2	3	3	4	4	5	6	7	8
	1	54 56	57		14	3			1	1	2	3	4	5	7
SAN LEANDRO CALIF	1	55 56	30	1	30	5	2	2	3	4	4	5	6	6	9
PORTLAND OREGON	1	54	20		80	15	1	5	6	8	11	12	18	23	28
	1	55	19	6	80	31	10	19	20	21	31	32	39	42	50
	1	54 55	39		80	23	5	7	10	13	20	21	29	38	43
	2	54	15		24	7	1	2	3	4	6	8	9	12	18
	5	54	10		28	13	1	1	12	13	13	14	15	18	21
	4	54	10		13	3			1	1	1	2	2	4	12
		54	55		80	10	1	1	3	5	9	11	13	16	23
		55	19	6	80	31	10	19	20	21	31	32	39	42	50
		54 55	74		80	16	1	2	5	9	11	14	19	24	39
SEATTLE WASH	1	57	20	8	130	47	11	21	28	35	43	48	63	72	83

TABLE 24. VANADIUM—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{3}											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36	30	300	88	32	47	65	70	77	90	94	99	103
MASSACHUSETS TOTAL	55	49	2	300	90	7	29	40	60	72	91	97	102	204
NEW JERSEY TOTAL	55 56	130		600	53	5	10	15	22	34	44	55	82	131
NEW YORK TOTAL	54 56	76		998	257	20	74	137	182	235	281	315	414	531
PENNSYLVANIA TOTAL	54 56	275		465	38	1	2	4	9	18	29	39	55	96
DIS COLUMBIA TOTAL	54 56	44		200	33			1	1	10	21	50	82	95
KENTUCKY TOTAL	54 55	70		25	4		1	1	2	2	3	3	6	8
MARYLAND TOTAL	57	18	42	430	133	50	67	77	89	98	137	166	174	210
WEST VIRGINA TOTAL	54 55	23		60	8		1	2	4	6	8	9	10	20
FLORIDA TOTAL	54 55	27		94	6	1	1	1	1	2	2	3	4	5
GEORGIA TOTAL	54 56	19		380	22		1	1	1	2	2	2	3	6
TENNESSEE TOTAL	55 56	32		40	2		1	1	1	1	1	2	2	3
ILLINOIS TOTAL	54 56	149		90	7		1	1	2	3	5	7	9	20
INDIANA TOTAL	55 56	86		140	18	1	2	5	7	9	10	19	30	44
MICHIGAN TOTAL	53 54	25		210	28	1	1	1	2	3	4	10	15	119
OHIO TOTAL	54 57	125		154	3			1	1	1	1	2	3	7
WISCONSIN TOTAL	57	19	5	48	20	6	8	9	10	13	18	21	39	43
MINNESOTA TOTAL	54 55	33		30	5		1	1	1	2	4	6	7	10
MISSOURI TOTAL	54 56	58		40	5	1	1	1	2	2	3	5	9	10
LOUISIANA TOTAL	54 55	50		8	1			1	1	1	1	2	3	4
TEXAS TOTAL	54 55	143		39	2			1	1	1	2	3	4	5
COLORADO TOTAL	54 55	26		7	2		1	2	2	2	3	3	4	5
UTAH TOTAL	54 55	31		40	6	1	2	3	4	5	6	7	8	10
ALASKA TOTAL	54 55	40		63	6		1	1	1	2	3	9	10	12
CALIFORNIA TOTAL	54 56	211		110	5			1	1	2	3	5	6	9
OREGON TOTAL	54 55	74		80	16	1	2	5	9	11	14	19	24	39
WASHINGTON TOTAL	57	20	8	130	47	11	21	28	35	43	48	63	72	83
NEW ENGLND TOTAL	55 56	85	2	300	89	21	32	49	66	75	91	96	101	200
MID ATLNTC TOTAL	54 56	481		998	77	1	4	10	18	30	43	63	109	231
MID EAST TOTAL	54 57	155		430	28		1	1	2	4	6	16	47	93
SOUTH EAST TOTAL	54 56	78		380	8		1	1	1	1	2	2	3	5
MID WEST TOTAL	53 57	404		210	10		1	1	2	3	5	8	10	29
GRT PLAINS TOTAL	54 56	91		40	5		1	1	2	2	3	6	9	10
GULF SOUTH TOTAL	54 55	193		39	2			1	1	1	2	2	3	5
ROCKY MNTN TOTAL	54 55	57		40	4	1	1	2	3	3	4	5	6	8
PAC COAST TOTAL	54 57	345		130	9		1	1	2	4	5	8	12	28
GRAND TOTAL	53 57	1889		998	31		1	1	3	5	8	16	37	84

TABLE 24. VANADIUM— SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23	2	90	23	3	7	8	9	10	19	20	43	50
LAKEHURST N J	1	55 56	19		180	23	1	2	3	5	8	8	10	37	54
KANAWHA CO W VA	1	54 55	22		9	1			1	1	1	1	1	3	4
HILLSBOROUGH CO FLA	1	54	4		14	6		1	1	4	4	4	8	8	15
FULTON CO GEORGIA	1	54	4		6	2		1	1	1	1	1	2	2	6
HAMILTON COUNTY OHIO	1	54 55	28		80	5				1	1	1	1	2	9
TONKA BAY MINN	1	54	9		2					1	1	1	1	1	1
DENVER COUNTY COLO	1	54 55	10		20	2				1	1	1	1	2	2
SALT LAKE CO UTAH	1	54	5		5	1			1	1	1	1	2	2	5
MULTNOMAH CNTY ORE	1	54	12		5						1	1	1	1	1
GRAND TOTAL		54 56	136		180	8			1	1	1	2	5	9	21
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12	1	20	6	1	2	3	3	5	7	8	8	10

TABLE 24. VANADIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		60	100	200	100	70	70	60	40	70	200	300	200
AVERAGE		55	100	112	82	66	46	56	32	70	122	166	150
MINIMUM		50	100	70	70	60	30	50	30	70	90	100	100
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		190	100	200	50	50	60	100	100	200	100	300	100
AVERAGE		190	85	140	50	50	40	65	45	200	95	153	100
MINIMUM		190	70	60	50	50	20	30	2	200	90	6	100
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		100	300	200	7	300	70	100	100	30	20	70	300
AVERAGE		70	113	120	7	195	46	55	52	20	20	70	200
MINIMUM		40	10	60	7	90	30	5	4	10	20	70	100
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	3	5	1		1	2	1		1	2
MAXIMUM		54	67	180	170	17		5	38	48		76	160
AVERAGE		43	42	76	72	17		5	24	48		76	107
MINIMUM		30	17		17	17		5	10	48		76	54
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	3	5	2	1	4	1		2		1
MAXIMUM		42	150	234	78	10	29	21	3		32		5
AVERAGE		37	88	108	36	7	29	9	3		24		5
MINIMUM		33	13	45	3	4	29	4	3		17		5
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	3	2		1	1	2	3	2		2
MAXIMUM		48	120	53	13		10	20	18	22	16		40
AVERAGE		47	74	36	9		10	20	14	17	13		31
MINIMUM		46	35	13	6		10	20	11	12	11		22
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	4	5			1	2		2	3	2
MAXIMUM		11	8	91	120			3	13		68	45	53
AVERAGE		9	8	46	41			3	10		40	25	38
MINIMUM		7	8		4			3	8		12	14	23
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1	1	1	1	2	1		1	1	3
MAXIMUM		56	140	50	5	3	12	6	7		56	25	98
AVERAGE		36	76	50	5	3	12	5	7		56	25	45
MINIMUM		16	12	50	5	3	12	5	7		56	25	12
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	4	4		2	2	2	1		1	2
MAXIMUM		130	230	600	120		84	23	110	89		130	160
AVERAGE		106	150	252	75		74	22	76	89		130	119
MINIMUM		82	110	28	36		65	22	42	89		130	79
NEW YORK N Y	54 56												
NUMBER OF SAMPLES		4	6	5	8	5	10	7	5	6	6	7	7
MAXIMUM		572	640	590	410	387	300	300	100	290	266	720	998
AVERAGE		355	315	363	313	223	148	151	46	116	192	432	455
MINIMUM		66	19	2	150	4	18	12		16	72	252	110
PHILADELPHIA PA	54 56												
NUMBER OF SAMPLES		20	16	14	15	19	12	13	13	10	8	8	9
MAXIMUM		448	330	110	465	280	110	66	73	83	58	120	170
AVERAGE		99	117	55	74	52	34	24	31	32	30	59	76
MINIMUM		4	9	3		1	6		6	13	10	12	18
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			42	28	8	7		33	3	18	21	22	55
AVERAGE			42	28	8	4		17	3	9	11	16	45
MINIMUM			42	28	8	2		2	3	5	2	10	35
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			53		160	10	11	20	39	32	12		19
AVERAGE			53		85	7	9	13	25	17	12		19
MINIMUM			53		11	4	8	7	10	7	12		19
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		2	2	4			3	2		3	3	7	2
AVERAGE			1	3			2	2		2	2	4	2
MINIMUM				2			2	2		2	2	2	2
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			8	7	8	9	2	2	3	4	4	10	9
AVERAGE			5	7	5	4	1	2	3	4	3	7	8
MINIMUM			4	7	3	2		2	3	4	2	4	7
WASHINGTON DC	54 56												
NUMBER OF SAMPLES		1	4	1	5	6	6	4	7	6	3	1	
MAXIMUM		200	100	20	70	80	80	90	90	80	100	100	
AVERAGE		200	50	20	19	44	18	22	21	21	33	100	
MINIMUM		200	16	20	1							100	

TABLE 24. VANADIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	5	4	4	13	13	12	6	1	6
MAXIMUM		3	6	8	3	3	18	23	7	25	7	4	19
AVERAGE		2	4	8	1		7	5	2	4	3	4	4
MINIMUM		2	3	8							2	4	
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		100	180	430	260	68	100	130	140	94			
AVERAGE		100	170	310	164	68	76	96	91	94			
MINIMUM		100	160	190	52	68	42	63	49	94			
CHARLESTON W VA	54 55												
NUMBER OF SAMPLES			1	1	4	4	3	2	1	1	3	2	1
MAXIMUM			10	3	60	9	20	6	9	10	10	10	20
AVERAGE			10	3	19	3	7	5	9	10	4	5	20
MINIMUM			10	3	2			5	9	10			20
TAMPA FLA	54 55												
NUMBER OF SAMPLES		2	1	1	5	5	2	2	2	3	1	2	1
MAXIMUM		3	10		2	94	2	2	7	5	4	2	3
AVERAGE		2	10		1	20	1	2	4	4	4	2	3
MINIMUM		2	10					2	2	3	4	2	3
ATLANTA GA	54 56												
NUMBER OF SAMPLES		1	2	3	3	2	1	3	1		1	1	1
MAXIMUM		6	380	3	2		2	2	1		4	3	20
AVERAGE		6	191	1	1		2		1		4	3	20
MINIMUM		6	3				2		1		4	3	20
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM			3	2	2	3		2	2	2	40		3
AVERAGE			1	1	1	2		2	1	2	9		3
MINIMUM						2		2		2			3
CHICAGO ILL	54 55												
NUMBER OF SAMPLES		4	7	6	3	12	20	14	9	8	16	13	8
MAXIMUM		10	65	50	90	40	10	10	10	60	30	30	54
AVERAGE		4	18	21	43	7	4	1	2	9	7	11	16
MINIMUM				2	10								
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		7	4	6	4	3	3	4	3	3		6	4
AVERAGE		4	3	4	4	1	2	4	2	1		4	3
MINIMUM		2	3	2	4		2	4	2			3	2
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		80	20	140	140	30	30	10	8	20	20	50	35
AVERAGE		35	9	40	44	16	12	2	4	8	9	11	12
MINIMUM		2	2		10	7			2	2	3	1	2
CINCINNATI OHIO	54 55												
NUMBER OF SAMPLES		3	6	13	15	11	19	8	9	12	8	3	6
MAXIMUM		154	10	15	6	5	6	3	2	2	10	7	7
AVERAGE		52	2	3	1	1					2	4	2
MINIMUM												2	
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				5	7	7		9	13	4	16		
AVERAGE				5	6	7		8	10	4	13		
MINIMUM				5	5	7		7	7	4	10		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		48	48	23	38	11	5	13	7	43	9		
AVERAGE		43	34	16	25	9	5	10	6	6	9		
MINIMUM		39	20	10	18	8	5	8	6	0	9		
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	2	3	5	4	3		5	4	3	2	1
MAXIMUM		30	20	10	7		2		2	4	7	10	30
AVERAGE		30	15	6	3				1	2	3	8	30
MINIMUM		30	10	2						2		7	30
KANSAS CITY MO	54 56												
NUMBER OF SAMPLES		4	3	5	5	5	3	2	4	1	1	1	1
MAXIMUM		40	24	14	3	3	10	1	6	2	2	10	10
AVERAGE		18	12	8	1		4		3	2	2	10	10
MINIMUM		4	6						2	2	2	10	10
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		10	9		20	2	2	2	3	3	3	4	9
AVERAGE		7	7		11	2	2	1	2	3	3	3	7
MINIMUM		4	6		3	2	2		2	3	3	2	6
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	6	6	6	4	4	4	5	3
MAXIMUM		1	6	7		3	4	8	5	4	8	2	4
AVERAGE		1	3	2		1		2	2	1	2		2
MINIMUM		1	2										

TABLE 24. VANADIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES		1	5	6	4	8	14	7	3	6	6	9	7
MAXIMUM			7	6	3	5	6	5	3	7	4	2	3
AVERAGE			3	2	1	1	1	3	2	3	1		1
MINIMUM										2			
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	4	2	3	3	2	3	3	4	2	3
MAXIMUM		4	5	10	5	6	4	5	10	2	2	2	7
AVERAGE		2	4	8	5	4	3	5	6	2	1	2	4
MINIMUM		2	3	7	5	1	2	5		2		2	2
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	5	2	2	2	2	1	2
MAXIMUM		3	7	7	5	3	3	3	5	3	4	6	4
AVERAGE		2	5	5	2	3		1	4	2	3	6	2
MINIMUM		2	3	3		3			3	2	3	6	
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	3	2	2	2	6	2	2	2	2	2	3
MAXIMUM		10	40	20	6	10	7	5	4	3	6	8	9
AVERAGE		8	19	11	5	6	2	4	3	3	4	7	6
MINIMUM		6	7	3	4	3		4	3	3	3	6	5
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES		1	3	3	8	4	7	1	3	3	3	1	3
MAXIMUM			10	11	63	19	10		10	2	3	3	3
AVERAGE			6	5	15	6	5		3		1	3	1
MINIMUM												3	
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		20	2	7	5	8	3	3	1	2	3	8	10
AVERAGE		11	1	3	5	3	2				1	2	10
MINIMUM		3			5	1	2						10
PASADENA CALIF	54 56												
NUMBER OF SAMPLES		4	5	1	4	5	5	7	2	4	6		
MAXIMUM		70	50	10	10	8	5	9		15	20		
AVERAGE		30	10	10	6	4	1	2		8	5		
MINIMUM				10	3					4			
BERKELEY CALIF	54 55												
NUMBER OF SAMPLES		3	4		2	2	2	3	2	3	4	5	4
MAXIMUM		8	10		13		6	5	2	1	2	30	27
AVERAGE		2	6		6		3	2	1			10	7
MINIMUM									1				
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		4	6	2	2	5	5	5	5	6	4	7	6
MAXIMUM		7	3	2	14	5	8	8	7	11	5	10	5
AVERAGE		3		2	7	2	3	3	5	4	2	3	1
MINIMUM				2									
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		5	2	4	3	4	9	30	5	4	7	10	5
AVERAGE		3	2	3	3	4	6	12	3	4	6	6	5
MINIMUM		1	2	3	3	4	4	6	2	4	6	2	5
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1	2	9	4	3		2	7	5	21	20	
MAXIMUM		80	13	60	20	16		40	40	50	80	29	
AVERAGE		80	12	20	11	8		35	23	30	13	8	
MINIMUM		80	11	2	3	2		30	6	10			
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	2	3	1		
MAXIMUM		130	81	88	23	72	32	50	63	42	50		
AVERAGE		101	73	88	17	50	20	37	37	32	50		
MINIMUM		72	66	88	11	34	8	25	11	19	50		

TABLE 24. VANADIUM— SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		90	9	70		10	50	50	7	50	20	40	20
AVERAGE		49	9	39		10	24	30	5	21	20	24	20
MINIMUM		9	9	9		10	3	10	2	5	20	8	20
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	3	3	2	1	1		2	1	2	1
MAXIMUM		40	1	58	180	8	10	3		5	2	57	15
AVERAGE		37	1	21	64	4	10	3		4	2	33	15
MINIMUM		34	1		6		10	3		3	2	9	15
KANAWHA CO W VA	54 55												
NUMBER OF SAMPLES		1	3	2	1	4	3	3	1		2	1	1
MAXIMUM			3	2	2	9		2	3		4		
AVERAGE			1	1	2	3			3		2		
MINIMUM					2				3				
HAMILTON COUNTY OHIO	54 55												
NUMBER OF SAMPLES			1	2		1	3	4	4	4	4	3	2
MAXIMUM				11				2	5	9			80
AVERAGE				0					1	2			60
MINIMUM				0									40
NONURBAN													
PT WORONZOF ALASKA	55 56												
NUMBER OF SAMPLES		1		1	1	2		1	2	1	1	1	1
MAXIMUM		10		1	5	8		7	3	2	3	8	20
AVERAGE		10		1	5	8		7	2	2	3	8	20
MINIMUM		10		1	5	8		7	2	2	3	8	20

TABLE 25. ZINC—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) $\times 10^{-3}$											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
WATERBURY CONN	1	55	14	40	4400	1544	44	459	550	724	789	1356	2331	2793	4009
	1	56	22	60	3900	1355	63	129	223	421	659	945	2074	3070	3567
	1	55 56	36	40	4400	1429	63	186	408	550	746	1624	2139	2977	3512
BOSTON MASS	1	55	23		46	16		1	6	7	13	20	22	29	41
EVERETT MASS	1	55	26		1100	128	7	9	10	20	41	96	108	124	223
ELIZABETH N J	1	55 56	20	7	290	72	9	10	18	29	44	63	90	129	155
PAULSBORO N J	1	55 56	23		180	54	9	15	17	22	37	53	69	75	146
CAMDEN N J	1	55 56	19	11	350	80	13	22	26	37	49	53	75	129	155
PERTH AMBOY N J	1	55 56	21		2100	155	6	20	26	34	41	44	63	129	155
TRENTON N J	1	55 56	16		380	74	5	6	18	29	37	42	44	155	171
JERSEY CITY N J	1	55 56	22	3	699	82	4	17	26	31	41	53	75	108	146
NEW YORK N Y	2	55 56	20	16	4600	998	41	83	108	171	205	223	867	1132	4009
	3	54 55	18	6	4300	371	22	31	34	63	129	198	223	245	320
		54 56	38	6	4600	693	29	37	83	129	186	208	267	867	1946
PHILADELPHIA PA	1	55	94		370	57	12	16	23	28	32	39	60	86	129
	1	56	11	14	180	73	15	31	37	44	75	83	90	108	129
	1	55 56	105		370	58	13	17	25	29	34	46	68	90	129
	4	56	11	3	2800	430	3	16	17	18	53	75	320	659	945
	5	56	9		260	71	1	22	26	34	37	37	53	119	129
	6	56	11		160	65	1	9	22	49	63	75	90	119	129
	7	56	11		4400	466	1	26	31	44	53	83	90	155	267
		55	94		370	57	12	16	23	28	32	39	60	86	129
		56	53		4400	227	9	22	33	44	53	75	90	125	267
		55 56	147		4400	118	12	17	25	31	38	51	74	108	150
ALTOONA PA	1	56	13		110	36	1	20	20	21	29	31	41	44	75
BRISTOL PA	1	55 56	18		580	84	7	11	12	16	18	53	60	63	223
CHESTER PA	1	55 56	18		390	105	6	17	18	31	44	58	75	155	320
ERIE PA	1	56	25		100	32	1	9	10	19	28	31	44	58	83
PITTSBURGH PA	1	56	21		550	136	22	29	31	56	75	90	155	267	320
WILLIAMSPORT PA	1	55 56	23		130	43	5	19	22	29	41	47	53	60	90
WASHINGTON DC	2	55 56	17	10	140	45	20	22	31	39	42	43	47	53	63
LOUISVILLE KY	1	54	17		540	60		1	1	7	9	22	31	90	142
	1	55	21	12	170	66	13	22	29	31	58	63	75	119	155
	1	54 55	38		540	63	1	8	13	27	30	56	69	90	146
	2	54	13		180	42	1	6	6	10	26	29	31	53	155
	2	55	10	6	100	50	6	20	22	31	44	63	75	83	90
	2	54 55	23		180	46	1	6	19	22	29	44	58	75	108
		54	31		540	51		1	2	7	20	27	31	63	146
		55	31	6	170	61	13	21	28	31	57	63	75	90	129
		54 55	62		540	56	1	6	15	26	29	49	61	86	142
BALTIMORE MD	1	57	16		170	61	1	41	44	49	53	63	75	83	108
CHARLESTON W VA	4	55	16		40	13	1	7	8	8	9	10	19	21	22
TAMPA FLA	1	55	21		70	16		1	6	7	10	13	20	22	31
ATLANTA GA	1	55 56	16	4	3200	374	7	22	44	58	69	90	186	459	659
CHATTANOOGA TENN	3	55	14		68	27	1	6	9	19	21	22	44	49	63
	4	55	17	10	170	56	10	19	22	31	42	44	53	119	129
	4	55 56	18	4	170	53	10	19	21	29	39	44	53	63	129
		55	31		170	43	6	10	19	21	31	42	49	58	119
		55 56	32		170	42	4	9	19	21	29	41	46	58	119
CHICAGO ILL	1	55	28	10	1900	246	21	42	58	75	108	155	178	285	550
	2	55	20	30	4900	588	44	53	90	129	238	267	383	520	1624
	4	55	29	7	4700	838	10	38	43	90	155	267	505	1356	3346
		55	77	7	4900	558	21	41	58	90	145	223	309	535	1785
		55	77	7	4900	558	21	41	58	90	145	223	309	535	1785
EAST ST LOUIS ILL	1	55 56	15	70	3500	687	90	108	129	142	186	294	383	945	2793
	2	55 56	14	20	710	152	22	29	31	83	90	119	142	155	459
		55 56	29	20	3500	429	29	75	90	119	136	149	186	383	945

TABLE 25. ZINC—URBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-3}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
EAST CHICAGO IND	1	55 56	19	7	4300	629	20	67	75	119	171	186	223	659	1356
	2	55 56	26	7	1300	244	15	31	90	108	163	186	245	302	352
	3	55 56	21	9	1470	211	15	44	66	72	83	90	122	155	550
	4	55 56	20	7	5000	336	22	31	55	59	63	83	108	171	223
		55 56	86	7	5000	343	21	44	66	77	104	142	182	294	659
CINCINNATI OHIO	1	55	22	6	2400	576	15	63	129	186	320	408	459	1070	1356
YOUNGSTOWN OHIO	1	57	12	53	320	128	53	58	90	108	115	122	129	205	223
MILWAUKEE WIS	1	57	19		140	45			1	1	53	56	63	83	129
MINNEAPOLIS MINN	1	54 55	21		90	30	9	10	10	21	29	31	40	43	53
KANSAS CITY MO	2	55 56	18	25	2900	238	31	39	42	53	63	75	90	99	223
	4	55 56	9		140	24	1	3	5	9	10	10	10	20	22
		55 56	27		2900	167	5	10	22	37	44	58	75	99	155
ST LOUIS MO	1	55 56	23	10	420	144	44	63	79	86	108	142	198	223	294
NEW ORLEANS LA	1	54 55	24		100	14		1	1	2	3	6	7	10	63
	2	54 55	22		430	30			1	1	5	9	10	29	44
		54 55	46		430	22			1	1	5	7	10	21	44
FT WORTH TEXAS	1	54 55	24		40	8			1	1	1	5	9	10	31
HOUSTON TEXAS	1	54	8		110	32	1	1	1	5	6	6	22	22	119
	1	55	56		300	52	7	10	20	24	31	49	54	62	129
	1	54 55	64		300	49	5	8	13	22	29	46	54	62	129
BELLAIRE TEXAS	1	54 55	31		94	25	1	3	6	7	12	13	22	44	85
DENVER COL	1	54 55	23	6	290	79	10	29	31	50	58	63	99	115	155
SALT LAKE CITY UTAH	2	54 55	30	8	280	66	9	21	29	42	53	61	69	119	146
ANCHORAGE ALASKA	1	54 55	21		642	72	1	1	9	10	19	22	44	63	186
SAN FRANCISCO CALIF	1	55	17		30	5				1	1	1	3	10	20
	1	56	15		60	11	1	1	3	4	5	6	9	10	44
	1	55 56	32		60	8			1	1	3	4	7	10	22
PASADENA CALIF	1	55 56	20		70	33	7	10	27	28	30	31	44	50	63
SAN JOSE CALIF	1	54 56	26		690	67	7	9	19	22	37	44	49	63	90
SAN LEANDRO CALIF	1	55 56	30	10	950	160	39	49	57	63	79	90	129	155	489
PORTLAND OREGON	1	54	1	760	760	760					789	789	789	789	789
	1	55	19	10	890	243	22	44	63	90	155	186	302	383	605
	1	54 55	20	10	890	269	22	44	63	90	155	285	320	550	659
SEATTLE WASH	1	57	20	46	170	78	55	58	61	66	72	78	84	90	119

TABLE 25. ZINC—URBAN STATIONS—TOTALS

STATE OR REGION	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10⁻³											
			MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
						10	20	30	40	50	60	70	80	90
CONNECTICUT TOTAL	55 56	36	40	4400	1429	63	186	408	550	746	1624	2139	2977	3512
MASSACHUSETS TOTAL	55	49		1100	75	1	6	9	13	21	27	41	96	124
NEW JERSEY TOTAL	55 56	121		2100	86	10	16	22	30	40	53	72	129	153
NEW YORK TOTAL	54 56	38	6	4600	693	29	37	83	129	186	208	267	867	1946
PENNSYLVANIA TOTAL	55 56	265		4400	98	9	17	23	29	38	51	66	93	171
DIS COLUMBIA TOTAL	55 56	17	10	140	45	20	22	31	39	42	43	47	53	63
KENTUCKY TOTAL	54 55	62		540	56	1	6	15	26	29	49	61	86	142
MARYLAND TOTAL	57	18		170	61	1	41	44	49	53	63	75	83	108
WEST VIRGINA TOTAL	55	16		40	13	1	7	8	8	9	10	19	21	22
FLORIDA TOTAL	55	21		70	16		1	6	7	10	13	20	22	31
GEORGIA TOTAL	55 56	16	4	3200	374	7	22	44	58	69	90	186	459	659
TENNESSEE TOTAL	55 56	32		170	42	4	9	19	21	29	41	46	58	119
ILLINOIS TOTAL	55 56	106	7	4900	522	27	42	75	102	138	181	297	520	1731
INDIANA TOTAL	55 56	86	7	5000	343	21	44	66	77	104	142	182	294	659
OHIO TOTAL	55 57	34	6	2400	418	31	63	90	124	155	223	383	459	1132
WISCONSIN TOTAL	57	19		140	45			1	1	53	56	63	83	129
MINNESOTA TOTAL	54 55	21		90	30	9	10	10	21	29	31	40	43	53
MISSOURI TOTAL	55 56	50		2900	156	10	26	42	56	75	88	108	195	267
LOUISIANA TOTAL	54 55	46		430	22			1	1	5	7	10	21	44
TEXAS TOTAL	54 55	119		300	34	1	4	6	10	18	24	41	54	90
COLORADO TOTAL	54 55	23	6	290	79	10	29	31	50	58	63	99	115	155
UTAH TOTAL	54 55	30	6	280	66	9	21	29	42	53	61	69	119	146
ALASKA TOTAL	54 55	21		642	72	1	1	9	10	19	22	44	63	186
CALIFORNIA TOTAL	54 56	109		950	68	1	4	9	21	31	42	53	72	129
OREGON TOTAL	54 55	20	10	890	269	22	44	63	90	155	285	320	550	659
WASHINGTON TOTAL	57	20	46	170	78	55	58	61	66	72	78	84	90	119
NEW ENGLND TOTAL	55 56	85		4400	649	6	10	21	40	90	129	459	945	2793
MID ATLNTC TOTAL	54 56	424		4600	146	10	17	25	31	41	56	77	124	219
MID EAST TOTAL	54 57	113		540	49	1	8	18	26	31	44	55	71	129
SOUTH EAST TOTAL	55 56	69		3200	111	3	7	10	20	27	39	51	68	155
MID WEST TOTAL	55 57	245		5000	408	19	42	64	84	118	153	236	383	1132
GRT PLAINS TOTAL	54 56	71		2900	119	9	19	28	39	49	69	86	129	223
GULF SOUTH TOTAL	54 55	165		430	31		1	5	7	10	20	29	50	64
ROCKY MNTN TOTAL	54 55	53	6	290	72	10	27	30	46	56	62	73	116	149
PAC COAST TOTAL	54 57	170		950	94	1	8	18	30	43	56	71	108	211
GRAND TOTAL	54 57	1395		5000	189	5	10	21	30	45	61	86	140	301

TABLE 25. ZINC—SUBURBAN AND NONURBAN STATIONS

STATION LOCATION	SITE	YEARS	No. OF SAMPLES	(MICROGRAMS PER CUBIC METER) x 10^{-2}											
				MIN	MAX	AVG	FREQUENCY DISTRIBUTION—PERCENT								
							10	20	30	40	50	60	70	80	90
SUBURBAN															
MIDDLESEX CNTY MASS	1	55	23		90	19	1	8	9	10	19	20	21	22	44
LAKEHURST N J	1	55 56	17	3	53	16	5	6	7	8	10	13	22	28	29
KANAWHA CO W VA	1	55	17		460	32			1	1	4	4	9	18	20
DENVER COUNTY COLO	1	54 55	10		20	11	1	1	3	9	10	13	19	20	21
SALT LAKE CO UTAH	1	54	3	7	16	12		7	7	7	13	13	13	13	18
GRAND TOTAL		54 56	70		460	20	1	3	7	8	10	15	19	21	29
NONURBAN															
PT WORONZOF ALASKA	1	55 56	12		20	12			7	8	10	10	10	20	20

TABLE 25. ZINC—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^3

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WATERBURY CONN	55 56												
NUMBER OF SAMPLES		2	2	4	5	3	3	3	4	1	4	3	2
MAXIMUM		70	3100	3100	3700	1400	2500	2200	710	3600	3800	3900	4400
AVERAGE		60	1765	1765	1356	586	1070	1123	527	3600	1435	2256	3700
MINIMUM		50	430	60	40	160	120	400	300	3600	220	670	3000
BOSTON MASS	55												
NUMBER OF SAMPLES		1	2	4	1	1	2	2	4	1	2	2	1
MAXIMUM		46	13	5		6	30	20	30	40	20	40	30
AVERAGE		46	9	1		6	19	13	15	40	20	35	30
MINIMUM		46	6			6	9	7		40	20	30	30
EVERETT MASS	55												
NUMBER OF SAMPLES		3	3	3	1	2	3	3	2	2	1	1	2
MAXIMUM		120	1100	110	20	210	290	110	20	110	10	690	100
AVERAGE		56	382	41	20	155	133	46	10	65	10	690	90
MINIMUM		10	6	7	20	100	10	10		20	10	690	80
ELIZABETH N J	55 56												
NUMBER OF SAMPLES		3	2	2	5	1		1	2	1		1	2
MAXIMUM		220	10	100	130	20		7	150	290		60	87
AVERAGE		86	10	77	73	20		7	80	290		60	58
MINIMUM		10	10	55	18	20		7	10	290		60	30
PAULSBORO N J	55 56												
NUMBER OF SAMPLES		2	4	2	4	2	1	4	1		2		1
MAXIMUM		180	82	140	66	20	23	18	16		140		52
AVERAGE		160	73	90	36	16	23	13	16		70		52
MINIMUM		140	69	40	17	12	23	8	16				52
CAMDEN N J	55 56												
NUMBER OF SAMPLES		2	3	2	1		1	1	2	3	2		2
MAXIMUM		120	140	140	17		23	100	350	58	24		47
AVERAGE		65	85	90	17		23	100	290	37	17		42
MINIMUM		11	47	41	17		23	100	230	20	11		37
PERTH AMBOY N J	55 56												
NUMBER OF SAMPLES		3	1	3	4			1	2		2	3	2
MAXIMUM		74	28	2100	140			6	38		60	260	46
AVERAGE		31	28	761	74			6	38		42	110	33
MINIMUM			28	43	14			6	38		24	32	21
TRENTON N J	55 56												
NUMBER OF SAMPLES		3	2	1		1	1	2	1		1	1	3
MAXIMUM		38	180	130		5	44	38			70	17	380
AVERAGE		24	98	130		5	44	36			70	17	196
MINIMUM		6	17	130		5	44	34			70	17	29
JERSEY CITY N J	55 56												
NUMBER OF SAMPLES		2	3	3	4		2	2	2	1		1	2
MAXIMUM		34	150	69	699		130	17	93	19		16	38
AVERAGE		19	122	50	199		85	10	90	19		16	28
MINIMUM		4	87	27	23		40	3	88	19		16	18
NEW YORK N Y	54 56												
NUMBER OF SAMPLES			3	1	4	1	7	4	4	2	3	4	5
MAXIMUM			1900	140	4300	170	4600	230	3600	4500	920	880	220
AVERAGE			697	140	1210	170	861	133	981	2289	470	394	116
MINIMUM			21	140	93	170	27	39	16	79	200	37	6
PHILADELPHIA PA	55 56												
NUMBER OF SAMPLES		17	13	13	13	18	12	13	13	10	8	8	9
MAXIMUM		210	120	110	120	2800	310	37	130	800	58	85	4400
AVERAGE		80	46	62	53	217	139	19	60	115	31	37	623
MINIMUM		3		7	14		9		9		12	16	19
ALTOONA PA	56												
NUMBER OF SAMPLES			1	1	2	3			1	2	2	1	
MAXIMUM			40	40	30	60			70	20	110	20	
AVERAGE			40	40	25	36			70	20	55	20	
MINIMUM			40	40	20	20			70	20		20	
BRISTOL PA	55 56												
NUMBER OF SAMPLES			1	1	1	2		2	1	4	2	2	2
MAXIMUM			28	63	47	13		66	13	580	18	210	300
AVERAGE			28	63	47	6		42	13	165	15	134	153
MINIMUM			28	63	47			18	13	7	13	58	7
CHESTER PA	55 56												
NUMBER OF SAMPLES			1		2	2	2	2	3	4	1		1
MAXIMUM			58		380	68	250	52	310	390	12		33
AVERAGE			58		210	34	128	35	128	147	12		33
MINIMUM			58		40		6	18	17	22	12		33
ERIE PA	56												
NUMBER OF SAMPLES		3	1	2	3	2	1	1		3	4	2	3
MAXIMUM		40	20	100	80	10	40	10		80	40	60	60
AVERAGE		21	20	65	50	5	40	10		40	17	55	33
MINIMUM		5	20	30			40	10		10		50	9
PITTSBURGH PA	56												
NUMBER OF SAMPLES		3	3	3			3	2		2	2	2	1
MAXIMUM		110	80	550			310	20		410	240	30	140
AVERAGE		70	46	306			146	10		300	165	30	140
MINIMUM		40	30	60			60			190	90	30	140

TABLE 25. ZINC—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
WILLIAMSPORT PA	55 56												
NUMBER OF SAMPLES			3	1	2	3	2	1	1	3	2	3	2
MAXIMUM			56	39	44	93	18	62	29	130	30	52	19
AVERAGE			40	39	35	67	11	62	29	86	15	40	17
MINIMUM			19	39	27	30	5	62	29	58		21	16
WASHINGTON DC	55 56												
NUMBER OF SAMPLES		1	2		1	3	2	1	3	2	1	1	
MAXIMUM		40	60		50	40	70	40	50	140	50	10	
AVERAGE		40	50		50	33	50	40	36	85	50	10	
MINIMUM		40	40		50	20	30	40	20	30	50	10	
LOUISVILLE KY	54 55												
NUMBER OF SAMPLES		2	3	1	1	1	3	13	13	12	6	1	6
MAXIMUM		30	100	170	120	54	160	110	140	150	130	30	540
AVERAGE		21	63	170	120	54	60	21	41	48	62	30	156
MINIMUM		12	28	170	120	54				2	6	30	20
BALTIMORE MD	57												
NUMBER OF SAMPLES		1	2	2	3	1	3	2	3	1			
MAXIMUM		86	50	96	170		55	53	64	55			
AVERAGE		86	25	90	125		48	48	38	55			
MINIMUM		86		85	65		43	43		55			
CHARLESTON W VA	55												
NUMBER OF SAMPLES			1	1		2	2	2	1	1	3	2	1
MAXIMUM				30		10	20	8	10	10	40	20	20
AVERAGE				30		5	14	7	10	10	23	13	20
MINIMUM				30			8	7	10	10	9	7	20
TAMPA FLA	55												
NUMBER OF SAMPLES		2	1	1	3	2	1	2	2	3	1	2	1
MAXIMUM		13	20		10	7	20	6	30	70	70		10
AVERAGE		11	20		9	3	20	3	30	36	70		10
MINIMUM		9	20		7		20		30	20	70		10
ATLANTA GA	55 56												
NUMBER OF SAMPLES		1	1	3	2	1	1	3	1		1	1	1
MAXIMUM		3200	80	610	980	400	40	60	70		190	160	20
AVERAGE		3200	80	240	492	400	40	42	70		190	160	20
MINIMUM		3200	80	40	4	400	40	7	70		190	160	20
CHATTANOOGA TENN	55 56												
NUMBER OF SAMPLES		1	5	3	2	2		1	4	4	5	3	2
MAXIMUM		4	50	50	6	170		10	40	50	140	60	110
AVERAGE		4	32	36	4	104		10	22	32	71	30	89
MINIMUM		4	20	20	3	38		10	8		10	10	68
CHICAGO ILL	55												
NUMBER OF SAMPLES		2	3	6	3	8	11	9	6	4	10	10	5
MAXIMUM		20	1200	2000	550	4900	3400	770	1500	3900	4700	3000	170
AVERAGE		20	446	468	363	993	605	141	371	1467	901	404	132
MINIMUM		20	20	40	10	20	90	7	30	40	40	40	60
EAST ST LOUIS ILL	55 56												
NUMBER OF SAMPLES		4	2	2	2	2	3	1	4	3	1	2	3
MAXIMUM		110	130	2400	290	710	320	3500	840	1700	30	140	130
AVERAGE		97	80	1255	230	370	163	3500	355	730	30	125	103
MINIMUM		80	30	110	170	30	20	3500	70	60	30	110	80
EAST CHICAGO IND	55 56												
NUMBER OF SAMPLES		6	5	14	7	4	6	10	5	7	6	8	8
MAXIMUM		4300	360	5000	250	180	290	510	730	1470	600	400	3000
AVERAGE		984	120	722	144	92	127	153	197	291	259	147	429
MINIMUM		9	30	20	64	7	13	7	39	7	74	15	20
CINCINNATI OHIO	55												
NUMBER OF SAMPLES		2		2	2	2	2	2	3	2	1	2	2
MAXIMUM		90		2400	970	400	250	440	1100	960	180	1300	690
AVERAGE		75		2400	665	235	200	370	416	487	180	653	545
MINIMUM		60		2400	360	71	150	300	30	14	180	6	400
YOUNGSTOWN OHIO	57												
NUMBER OF SAMPLES				1	2	1	1	2	2	1	2		
MAXIMUM				57	120	140	53	110	320	61	190		
AVERAGE				57	103	140	53	110	210	61	190		
MINIMUM				57	86	140	53	110	100	61	190		
MILWAUKEE WIS	57												
NUMBER OF SAMPLES		2	2	2	3	2	1	2	2	2	1		
MAXIMUM		76	140	72	120	140		62	60	77			
AVERAGE		67	70	36	40	96		31	30	38			
MINIMUM		58				53							
MINNEAPOLIS MINN	54 55												
NUMBER OF SAMPLES		1	1	1	1		2		5	4	3	2	1
MAXIMUM		30	30	90	20		10		40	40	40	70	50
AVERAGE		30	30	90	20		10		26	22	33	39	50
MINIMUM		30	30	90	20		10		10		20	9	50
KANSAS CITY MO	55 56												
NUMBER OF SAMPLES		4	2	3	3	3	2	2	4	1	1	1	1
MAXIMUM		80	290	50	100	100	40	70	220	140	40	80	2900
AVERAGE		33	180	42	36	36	35	40	90	140	40	80	2900
MINIMUM		10	70	37		3	30	10	20	140	40	80	2900

TABLE 25. ZINC—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) × 10^3

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ST LOUIS MO	55 56												
NUMBER OF SAMPLES		2	2		2	3	2	2	3	1	1	3	2
MAXIMUM		100	420		280	200	140	190	320	60	100	200	110
AVERAGE		70	255		180	126	105	100	280	60	100	110	100
MINIMUM		40	90		80	50	70	10	260	60	100	50	90
NEW ORLEANS LA	54 55												
NUMBER OF SAMPLES		2	3	3	4	4	4	6	4	4	4	5	3
MAXIMUM		10	40	10	30	30		430	9	100	60	20	60
AVERAGE		9	22	4	11	11		88	4	25	15	5	29
MINIMUM		8	7										7
FT WORTH TEXAS	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	2	2
MAXIMUM		20	10	7	5	3	40					30	40
AVERAGE		15	10	3	2	1	25					18	20
MINIMUM		10	10				10					7	
HOUSTON TEXAS	54 55												
NUMBER OF SAMPLES			5	6	4	5	6	7	3	6	6	9	7
MAXIMUM			200	57	7	110	54	220	57	300	94	140	110
AVERAGE			82	28	3	65	41	50	30	131	28	33	43
MINIMUM			24	6		49	6		6	22	6	5	6
BELLAIRE TEXAS	54 55												
NUMBER OF SAMPLES		3	2	3	2	2	2	2	3	3	4	2	3
MAXIMUM		94	22	37	7	40	50	11		11	90	24	93
AVERAGE		42	14	20	5	20	27	5		10	67	14	39
MINIMUM		12	7	7	3		5			10	6	5	11
DENVER COL	54 55												
NUMBER OF SAMPLES		2	2	2	2	2	2	2	2	2	2	1	2
MAXIMUM		50	50	130	120	110	100	60	30	30	100	110	290
AVERAGE		40	50	100	90	85	65	60	30	20	53	110	265
MINIMUM		30	50	70	60	60	30	60	30	10	6	110	240
SALT LAKE CITY UTAH	54 55												
NUMBER OF SAMPLES		3	2	2	2	2	6	2	2	2	2	2	3
MAXIMUM		140	280	70	60	20	50	70	10	130	70	160	120
AVERAGE		73	205	55	34	20	29	55	9	125	65	110	83
MINIMUM		30	130	40	9	20	9	40	8	120	60	60	60
ANCHORAGE ALASKA	54 55												
NUMBER OF SAMPLES			1	2	8	2	4		1		1	1	1
MAXIMUM			10	10	642	50	22				10		10
AVERAGE			10	10	168	43	10				10		10
MINIMUM			10	10	7	36					10		10
SAN FRANCISCO CALIF	55 56												
NUMBER OF SAMPLES		3	2	2	1	3	2	5	2	3	3	5	1
MAXIMUM		10	60		3	40	20	10		9	30	20	20
AVERAGE		5	30		3	17	12	4		3	10	4	20
MINIMUM					3	5	4						20
PASADENA CALIF	55 56												
NUMBER OF SAMPLES		2	2	1	3	3	2	3		2	2		
MAXIMUM		50	50	40	65	30	30	70		50	20		
AVERAGE		40	25	40	40	23	18	53		45	15		
MINIMUM		30		40	27	10	7	30		40	10		
SAN JOSE CALIF	54 56												
NUMBER OF SAMPLES		1	2	2	1	3	3	3	3	2	1	2	3
MAXIMUM		20	30	10	47	80	50	41	51	200	55	50	690
AVERAGE		20	19	5	47	43	25	33	41	160	55	30	257
MINIMUM		20	8		47	10	7	19	35	120	55	10	3
SAN LEANDRO CALIF	55 56												
NUMBER OF SAMPLES		3	1	2	1	1	2	4	4	1	3	7	1
MAXIMUM		310	110	80	60	50	540	150	120	80	490	950	40
AVERAGE		153	110	70	60	50	345	75	72	80	223	274	40
MINIMUM		60	110	60	60	50	150	10	40	80	40	50	40
PORTLAND OREGON	54 55												
NUMBER OF SAMPLES		1		3	1			2	7	5	1		
MAXIMUM		760		360	20			150	630	280	890		
AVERAGE		760		136	20			115	335	146	890		
MINIMUM		760		10	20			80	40	60	890		
SEATTLE WASH	57												
NUMBER OF SAMPLES		2	2	1	2	3	2	2	3	3	1		
MAXIMUM		100	85	85	68	110	67	60	84	170	110		
AVERAGE		92	74	85	61	81	64	53	70	101	110		
MINIMUM		85	63	85	55	65	61	46	56	58	110		

TABLE 25. ZINC— SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-2}

STATION LOCATION	YEARS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SUBURBAN													
MIDDLESEX CNTY MASS	55												
NUMBER OF SAMPLES		2	1	2		1	3	2	3	3	1	2	3
MAXIMUM		40	10	50		9	20	20	20	20	20	30	90
AVERAGE		25	10	35		9	6	11	11	16	20	30	35
MINIMUM		10	10	20		9		3	5	9	20	30	8
LAKEHURST N J	55 56												
NUMBER OF SAMPLES		2	1	2	2	2	1	1		2	1	2	1
MAXIMUM		23	7	31	53	10	30	8		12	8	30	19
AVERAGE		15	7	18	30	6	30	8		10	8	25	19
MINIMUM		7	7	5	7	3	30	8		8	8	20	19
KANAWHA CO W VA	55												
NUMBER OF SAMPLES		1	3	2		2	1	3	1		2	1	1
MAXIMUM			460	20		8	20				14		4
AVERAGE			157	18		4	20				7		4
MINIMUM			4	17			20						4
DENVER COUNTY COLO	54 55												
NUMBER OF SAMPLES			1	1	1			1		2	2	1	1
MAXIMUM			20	20	9			12		10	3	20	20
AVERAGE			20	20	9			12		5	1	20	20
MINIMUM			20	20	9			12				20	20
NONURBAN													
PT WORONZOF ALASKA	55 56												
NUMBER OF SAMPLES		1		1	1	2		1	2	1	1	1	1
MAXIMUM		20		10	20	10			20	10	10		8
AVERAGE		20		10	20	8			12	10	10		8
MINIMUM		20		10	20	7			5	10	10		8

TABLE 26. SILVER—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{4}

STATION LOCATION	YEARS	No. OF SAMPLES ANAL	No. OF SAMPLES BELOW MINIMUM DETECTABLE QUANTITY	MAX
ELIZABETH N J	55	1	1	
PAULSBORO N J	55	2	2	
CAMDEN N J	55	2	2	
PERTH AMBOY N J	55	2	2	
TRENTON N J	55	1	1	
JERSEY CITY N J	55	2	2	
NEW YORK N Y	54 55	37	36	8
PHILADELPHIA PA	54	10	10	
WASHINGTON D C	54 55	29	29	
LOUISVILLE KY	54	9	9	
CHARLESTON W VA	54	11	11	
TAMPA FLA	54	10	10	
ATLANTA GA	54	10	10	
CHICAGO ILL	54 55	43	42	400
DETROIT MICH	53 54	33	33	
CINCINNATI OHIO	54 55	147	144	11
MINNEAPOLIS MINN	54	15	15	
KANSAS CITY MO	54	13	13	
NEW ORLEANS LA	54	4	4	
FT WORTH TEXAS	54	9	9	
LAKEWORTH TEXAS	54	6	6	
HOUSTON TEXAS	54	18	18	
BELLAIRE TEXAS	54	4	4	
DENVER COLO	54	3	3	
SALT LAKE CITY UTAH	54	5	5	
ANCHORAGE ALASKA	54 55	29	29	
LOS ANGELES CALIF	54	19	19	
PASADENA CALIF	54 55	28	27	8
BERKELEY CALIF	54 55	35	35	
SAN JOSE CALIF	54 55	34	34	
PORTLAND OREGON	54	54	53	743
GRAND TOTAL	54 55	625	618	743

TABLE 27. ARSENIC—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{3}

STATION LOCATION	YEARS	No. OF SAMPLES ANAL	No. OF SAMPLES BELOW MINIMUM DETECTABLE QUANTITY	MAX
ELIZABETH N J	55	1	1	
PAULSBORO N J	55	2	2	
CAMDEN N J	55	2	1	2
PERTH AMBOY N J	55	2	1	3
TRENTON N J	55	1		1
JERSEY CITY N J	55	2	1	2
NEW YORK N Y	54 55	37	4	25
PHILADELPHIA PA	54	10	4	141
WASHINGTON D C	54 55	29	13	4
LOUISVILLE KY	54	9	4	9
CHARLESTON W VA	54	11	3	34
TAMPA FLA	54	10	9	1
ATLANTA GA	54	10	6	2
CHICAGO ILL	54 55	42	14	32
DETROIT MICH	53 54	33	3	10
CINCINNATI OHIO	54 55	145	53	30
MINNEAPOLIS MINN	54	15	10	3
KANSAS CITY MO	54	13	8	14
NEW ORLEANS LA	54	4	4	
FT WORTH TEXAS	54	9	7	8
LAKEWORTH TEXAS	54	6	6	
HOUSTON TEXAS	54	17	8	3
BELLAIRE TEXAS	54	4	2	2
DENVER COLO	54	3	1	2
SALT LAKE CITY UTAH	54	5	3	3
ANCHORAGE ALASKA	54 55	29	22	2
LOS ANGELES CALIF	54	19	5	65
PASADENA CALIF	54 55	27	15	5
BERKELEY CALIF	54 55	35	21	7
SAN JOSE CALIF	54 55	34	19	22
PORTLAND OREGON	54	54	25	6
GRAND TOTAL	54 55	520	275	65

TABLE 26. SILVER—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-4}

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
SUBURBAN				
LAKEHURST N J	55	2	2	
KANAWHA COUNTY W VA	54	6	6	
HILLSBOROUGH CO FLA	54	4	4	
FULTON COUNTY GA	54	7	7	
HAMILTON COUNTY OHIO	54 55	36	35	10
TONKA BAY MINN	54	9	9	
SALT LAKE CNTY UTAH	54	5	5	
MULTNOMAH CNTY ORE	54	12	12	
GRAND TOTAL	54 55	81	80	10

TABLE 27. ARSENIC—SUBURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
SUBURBAN				
LAKEHURST N J	55	2	2	
KANAWHA COUNTY W VA	54	6	3	42
HILLSBOROUGH CO FLA	54	4	3	1
FULTON COUNTY GA	54	8	4	4
HAMILTON COUNTY OHIO	54 55	36	18	63
TANKA BAY MINN	54	9	7	1
SALT LAKE CO UTAH	54	5	2	8
MULTNOMAH CNTY ORE	54	12	6	6
GRAND TOTAL	54 55	52	45	63

TABLE 28. BERYLLIUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
WATERBURY CONN	55 56	36	36	
BOSTON MASS	55	23	23	
EVERETT MASS	55	26	26	
ELIZABETH N J	55 56	21	21	
PAULSBORO N J	55 56	25	25	
CAMDEN N J	55 56	21	21	
PERTH AMBOY N J	55 56	23	23	
TRENTON N J	55 56	17	17	
JERSEY CITY N J	55 56	23	23	
NEW YORK N Y	54 56	75	70	3
PHILADELPHIA PA	54 56	157	152	5
ALTOONA PA	56	13	13	
BRISTOL PA	55 56	18	18	
CHESTER PA	55 56	18	18	
ERIE PA	56	25	25	
PITTSBURGH PA	56	21	21	
WILLIAMSPORT PA	55 56	23	23	
WASHINGTON D C	54 56	46	45	1
LOUISVILLE KY	54 55	71	68	5
BALTIMORE MD	57	18	18	
CHARLESTON W VA	54 55	27	23	1
TAMPA FLA	54 55	31	30	2
ATLANTA GA	54 56	25	24	1
CHATTANOOGA TENN	55 56	32	32	
CHICAGO ILL	54 55	120	117	1
EAST ST LOUIS ILL	55 56	29	29	
EAST CHICAGO IND	55 56	86	86	
DETROIT MICH	53 54	33	27	1
CINCINNATI OHIO	54 55	169	108	40
YOUNGSTOWN OHIO	57	11	11	
MILWAUKEE WIS	57	16	16	
MINNEAPOLIS MINN	54 55	36	34	1
KANSAS CITY MO	54 56	40	37	2
ST LOUIS MO	55 56	23	23	
NEW ORLEANS LA	54 55	50	50	
FT WORTH TEXAS	54 55	33	32	2
LAKEWORTH TEXAS	54	5	5	
HOUSTON TEXAS	54 55	79	77	3
BELLAIRE TEXAS	54 55	35	33	2
DENVER COLO	54 55	26	25	3
SALT LAKE CITY	54 55	31	31	
ANCHORAGE ALASKA	54 55	38	37	1
LOS ANGELES CALIF	54	18	15	1
SAN FRANCISCO CALIF	55 56	32	32	
PASADENA CALIF	54 56	48	46	1
BERKELEY CALIF	54 55	35	33	1
SAN JOSE CALIF	54 56	59	59	
SAN LEANDRO CALIF	55 56	30	30	
PORTLAND OREGON	54 55	74	70	8
SEATTLE WASHINGTON	57 57	20	20	
GRAND TOTAL	54 57	2014	1901	40

TABLE 29. COBALT—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
WATERBURY CONN	55 56	36	34	6
BOSTON MASS	55	23	21	4
EVERETT MASS	55	26	22	5
ELIZABETH N J	55 56	20	20	
PAULSBORO N J	55 56	23	23	
CAMDEN N J	55 56	19	19	
PERTH AMBOY N J	55 56	21	21	
TRENTON N J	55 56	16	16	
JERSEY CITY N J	55 56	21	20	20
NEW YORK N Y	54 56	39	38	4
PHILADELPHIA PA	55 56	147	119	8
ALTOONA PA	56	13	13	
BRISTOL PA	55 56	18	18	
CHESTER PA	55 56	18	18	
ERIE PA	56	25	25	
PITTSBURGH PA	56	21	21	
WILLIAMSPORT PA	55 56	23	23	
WASHINGTON D C	55 56	17	17	
LOUISVILLE KY	54 55	62	62	
BALTIMORE MD	57	18	18	
CHARLESTON W VA	55	16	9	7
TAMPA FLA	55	21	20	5
ATLANTA GA	55 56	16	16	
CHATTANOOGA TENN	55 56	32	32	
CHICAGO ILL	55	77	70	5
EAST ST LOUIS ILL	55 56	29	28	6
EAST CHICAGO IND	55 56	86	78	10
CINCINNATI OHIO	55	23	23	
YOUNGSTOWN OHIO	57	12	12	
MILWAUKEE WIS	57	19	19	
MINNEAPOLIS MINN	54 55	21	21	
KANSAS CITY MO	55 56	27	26	4
ST LOUIS MO	55 56	23	23	
NEW ORLEANS LA	54 55	46	46	
FT WORTH TEXAS	54 55	24	23	3
HOUSTON TEXAS	54 55	64	63	6
BELLAIRE TEXAS	54 55	31	29	5
DENVER COLO	54 55	23	21	6
SALT LAKE CITY UTAH	54 55	26	22	7
ANCHORAGE ALASKA	54 55	13	13	
SAN FRANCISCO CALIF	55 56	32	32	
PASADENA CALIF	55 56	19	16	5
SAN JOSE CALIF	55 56	25	25	
SAN LEANDRO CALIF	55 56	30	30	
PORTLAND OREGON	54 56	20	10	5
SEATTLE WASH	57	20	20	
GRAND TOTAL	54 57	1381	1295	10

TABLE 28. BERYLLIUM—SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
SUBURBAN				
MIDDLESEX CTNY MASS	55	23	23	
LAKEHURST N J	55 56	19	19	
KANAWHA COUNTY W VA	54 55	23	23	
HILLSBOROUGH CO FLA	54	4	3	1
FULTON COUNTY GA	54	6	6	
HAMILTON COUNTY OHIO	54 55	35	24	40
TONKA BAY MINN	54	9	9	
DENVER COUNTY COLO	54 55	10	10	
SALT LAKE CTNY UTAH	54	5	5	
MULTNOMAH CTNY ORE	54	12	12	
GRAND TOTAL	54 56	146	134	40
NONURBAN				
PT WORONZOF ALASKA	55 56	12	12	

TABLE 29. COBALT—SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10⁻³

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
SUBURBAN				
MIDDLESEX CTNY MASS	55	23	21	5
LAKEHURST N J	55 56	17	17	
KANAWHA COUNTY W VA	55	17	11	5
DENVER COUNTY COLO	54 55	11	11	
GRAND TOTAL	54 56	68	66	5
NONURBAN				
PT WORONZOF ALASKA	55 56	12	12	

TABLE 30. MOLYBDENUM—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
WATERBURY CONN	55 56	36	36	
BOSTON MASS	55	23	23	
EVERETT MASS	55	26	23	1
ELIZABETH N J	55 56	20	20	
PAULSBORO N J	55 56	23	23	
CAMDEN N J	55 56	19	19	
PERTH AMBOY N J	55 56	21	21	
TRENTON N J	55 56	16	16	
JERSEY CITY N J	55 56	21	21	
NEW YORK N Y	54 56	39	39	
PHILADELPHIA PA	55 56	147	138	3
ALTOONA PA	56	13	13	
BRISTOL PA	55 56	18	18	
CHESTER PA	55 56	18	18	
ERIE PA	56	25	23	1
PITTSBURGH PA	56	21	5	8
WILLIAMSPORT PA	55 56	23	21	1
WASHINGTON D C	55 56	17	17	
LOUISVILLE KY	54 55	62	56	1
BALTIMORE MD	57	18	2	10
CHARLESTON W VA	55	16	14	4
TAMPA FLA	55	21	21	
ATLANTA GA	55 56	16	16	
CHATTANOOGA TENN	55 56	32	32	
CHICAGO ILL	55	77	56	2
EAST ST LOUIS ILL	55 56	29	29	
EAST CHICAGO IND	55 56	86	50	16
CINCINNATI OHIO	55	23	22	1
YOUNGSTOWN OHIO	57	12	1	8
MILWAUKEE WIS	57	19	5	4
MINNEAPOLIS MINN	54 55	21	21	
KANSAS CITY MO	55 56	27	27	
ST LOUIS MO	55 56	23	22	1
NEW ORELEANS LA	54 55	46	46	
FT WORTH TEXAS	54 55	24	22	1
HOUSTON TEXAS	54 55	64	63	2
BELLAIRE TEXAS	54 55	31	26	1
DENVER COLO	54 55	23	12	4
SALT LAKE CITY UTAH	54 55	26	24	1
ANCHORAGE ALASKA	54 55	13	13	
SAN FRANCISCO CALIF	55 56	32	32	
PASADENA CALIF	55 56	19	19	
SAN JOSE CALIF	55 56	25	25	
SAN LEANDRO CALIF	55 56	30	30	
PORTLAND OREGON	54 56	20	18	1
SEATTLE WASH	57	20	17	3
GRAND TOTAL	54 57	1381	1230	8

TABLE 31. ANTIMONY—URBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	No. OF SAMPLES		MAX
		ANAL	BELOW MINIMUM DETECTABLE QUANTITY	
WATERBURY CONN	55 56	36	36	
BOSTON MASS	55	23	20	50
EVERETT MASS	55	26	22	100
ELIZABETH N J	55 56	20	20	
PAULSBORO N J	55 56	23	23	
CAMDEN N J	55 56	19	19	
PERTH AMBOY N J	55 56	21	19	180
TRENTON N J	55 56	16	16	
JERSEY CITY N J	55 56	21	21	
NEW YORK N Y	54 56	39	39	
PHILADELPHIA PA	55 56	147	142	270
ALTOONA PA	56	13	13	
BRISTOL PA	55 56	18	18	
CHESTER PA	55 56	18	18	
ERIE PA	56	25	25	
PITTSBURGH PA	56	21	20	60
WILLIAMSPORT PA	55 56	23	23	
WASHINGTON D C	55 56	17	17	
LOUISVILLE KY	54 55	62	61	50
BALTIMORE MD	57	18	15	67
CHARLESTON W VA	55	15	15	
TAMPA FLA	55	21	21	
ATLANTA GA	55 56	16	16	
CHATTANOOGA TENN	55 56	32	32	
CHICAGO ILL	55	77	69	100
EAST ST LOUIS ILL	55 56	29	28	30
EAST CHICAGO IND	55 56	86	72	200
CINCINNATI OHIO	55	23	23	
YOUNGSTOWN OHIO	57	12	12	
MILWAUKEE WIS	57	19	18	130
MINNEAPOLIS MINN	54 55	21	21	
KANSAS CITY MO	55 56	27	27	
ST LOUIS MO	55 56	23	23	
NEW ORLEANS LA	54 55	46	45	90
FT WORTH TEXAS	54 55	24	24	
HOUSTON TEXAS	54 55	64	63	50
BELLAIRE TEXAS	54 55	31	29	40
DENVER COLO	54 55	23	21	50
SALT LAKE CITY UTAH	54 55	26	26	
ANCHORAGE ALASKA	54 55	13	13	
SAN FRANCISCO CALIF	55 56	32	32	
PASADENA CALIF	55 56	19	19	
SAN JOSE CALIF	55 56	25	25	
SAN LEANDRO CALIF	55 56	30	30	
PORTLAND OREGON	54 56	20	20	
SEATTLE WASH	57	20	19	72
GRAND TOTAL	54 57	1380	1330	270

TABLE 30. MOLYBDENUM—SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	No. OF SAMPLES ANAL	No. OF SAMPLES BELOW MINIMUM DETECTABLE QUANTITY	MAX
SUBURBAN				
MIDDLESEX CNTY MASS	55	23	23	
LAKEHURST N J	55 56	17	17	
KANAWHA COUNTY W VA	55	17	17	
DENVER COUNTY COLO	54 55	11	11	
GRAND TOTAL	54 56	68	68	
NONURBAN				
PT WORONZOF ALASKA	55 56	12	12	

TABLE 31. ANTIMONY—SUBURBAN AND NONURBAN STATIONS

(MICROGRAMS PER CUBIC METER) x 10^{-3}

STATION LOCATION	YEARS	No. OF SAMPLES ANAL	No. OF SAMPLES BELOW MINIMUM DETECTABLE QUANTITY	MAX
SUBURBAN				
MIDDLESEX CTNY MASS	55	23	17	60
LAKEHURST N J	55 56	17	17	
KANAWHA COUNTY W VA	55	17	17	
DENVER COUNTY COLO	54 55	11	11	
GRAND TOTAL	54 56	68	62	60
NONURBAN				
PT WORONZOF ALASKA	55 56	12	12	

STATISTICAL INTERPRETATIONS

LOG-NORMALLY OF FREQUENCY DISTRIBUTIONS

Frequency distributions of values obtained from the analysis of large numbers of samples are in general highly skewed. However, it has been found that, in many instances, the logarithms of the values are approximately normally distributed. The true description of the distributions is admittedly quite complex due to contributing factors such as variations in weather, sampling, and the composition of the atmosphere, yet this empirical approximation is quite useful in the analysis of air quality data. Evidence of this tendency toward log-normality is obtained quite easily by plotting cumulative frequency distributions on logarithmic probability graph paper, on which the ordinate is logarithmic and the abscissa is proportional to the normal probability distribution functions. Concentrations, in this report usually expressed as micrograms per cubic meter of air, are plotted as ordinates against the percentage of samples not greater than such concentrations as abscissae. In this report such percentage values are deciles. There are available from this report nine pairs of values for each distribution which may be plotted to test the hypothesis of log-normality. The hypothesis is then accepted or rejected depending on how well the points fit a straight line.

One indication of how well a straight line fits the set of nine points (i.e. how nearly log-normal a distribution is) can be obtained by comparing the geometric mean and the median. The geometric mean, which is the antilog of the arithmetic mean of the logarithms, can be estimated from the graph by reading the value of the 50% intercept of the line. The median is merely the 50 percentile value. A necessary, but not sufficient, condition for log-normality is that the geometric mean and the median are equal. In assessing the goodness of fit of the straight lines to the plotted points and the correspondence of the plotted 50% decile points (the medians) to the 50% intercepts of the lines (the geometric means) it should be noted that the process of computing the decile values, previously explained, rounds off concentration values to the nearest whole number. Thus, points should be plotted only as whole numbers on the graph.

As an example of the log-normal character of the two most significant distributions developed in this report, the cumulative frequency distributions of suspended particulate levels for all urban sites and for all nonurban sites in the United States for the years 1953-57, inclusive, are shown in Table F and plotted therefrom on Fig. 11. These distributions exhibit characteristics of log-normality.

A comparison of distributions represented by two such straight lines can be made by comparing their geometric means and their standard geometric deviations, the values of which are determined from the slopes of the two lines. The standard geometric deviation is the ratio of the 84.13 percent value to the geometric mean. It is also expressible as the antilog of the standard deviation of the logarithms.

The standard geometric deviations for the urban and nonurban distributions are almost identical, but the geometric means differ significantly. The vertical distance between the two lines represents the difference between urban and nonurban pollution. If the latter be considered as a baseline, the difference represents pollution attributable to urban activities. A line which represents that difference has been plotted as a dashed line on Fig. 11.

The log-probability plot can be used to estimate pollutant concentration occurring with specific frequencies and the

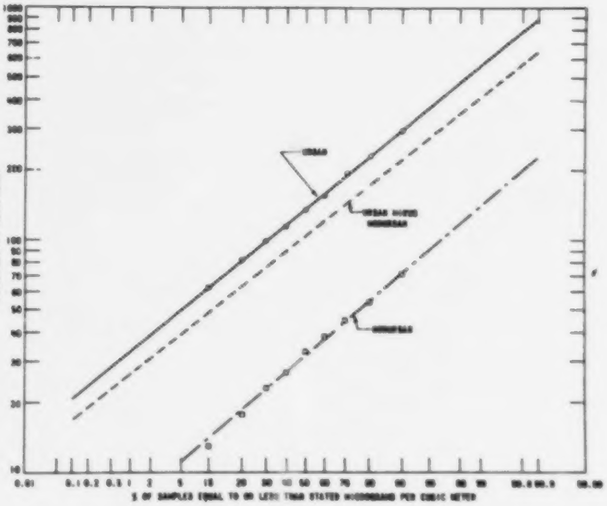

Fig. 11. Cumulative Frequency Distribution—Suspended Particulate Matter, All Urban and Nonurban Stations, 1953-1957

TABLE F. NATIONAL TOTALS 1953-1957

Suspended Particulate Matter — μg/m³

					Frequency Distribution								
	No. of samples	Min.	Max.	Av.	10	20	30	40	50	60	70	80	90
Urban	9410	9	3112	163	62	82	99	117	136	158	186	224	295
Nonurban	511	3	460	40	13	18	23	27	33	38	45	54	72
Difference					49	64	76	90	103	120	141	170	223

frequency of occurence of various 24-hour average pollutant concentrations by extrapolation beyond the 10% and 90% deciles to cover the desired range. Thus the minimum and maximum sample values for the approximately 1500 day sampling period represented by the urban data may be estimated from Fig. 11. The values corresponding to the frequency of occurrence of 1/1500 (i.e. 0.067% and 99.933%) are 19 and 980$\mu g/m^3$ respectively. The fact that the minimum and maximum values shown in Table F differ from the predicted values has two possible explanations:

1. The predicted values are in fact actually the means of a range of values, the width of which depends upon the confidence limits assigned to the prediction so that the lower limit of the minimum range and the upper limit of the maximum range would more closely approach the observed maximum and minimum values. 2. There is the possibility that out of about 10,000 samples, one might have been grossly contaminated with extraneous particulate matter to cause the maximum observed and another might have represented less than 24 hours to cause the minimum observed.

It should further be noted that the arithmetic mean (i.e. average) concentrations shown in Table F (163 and 40$\mu g/m^3$) are greater than the median (50% decile) values (136 and 33$\mu g/m^3$, respectively). This relationship is usual for asymmetric frequency distribution in which the longer tail lies toward the higher values.

COMPARISON OF DAILY, WEEKLY, AND BIWEEKLY RANDOM SAMPLING SCHEDULES

In Philadelphia the high volume sampler located at site 1 (City Hall Annex) was operated more or less continuously during 1955 and 1956 and a total of 596 samples was collected: 289 in 1955 and 307 in 1956. From this complete set of samples, a smaller sample was selected for each year according to a random schedule prepared in the manner previously described. This produced a set of 25 values for each year, one less than the number prescribed, due to a shut down during the sampling period. The set of values selected differed from a true random sample in that the starting time of the sampler was more or less the same. This deviation from a truly random sample should not alter the results. Simiarly, another set consisting of 44 values was selected from the 1956 data following a weekly schedule in which all observations selected were for the same day of each week (Tuesday).

TABLE G. COMPARATIVE STATISTICS FOR DAILY WEEKLY, AND RANDOM SAMPLING

SUSPENDED PARTICULATE

Site 1 Philadelphia, Pa. 1956

(Concentrations in micrograms per cubic meter)

	Daily	Weekly	Biweekly Random
OBSERVATIONS			
Number of samples	307	44	25
Minimum	68	99	136
Maximum	761	449	308
Percentiles—10	128	137	146
20	148	160	160
30	167	188	171
40	184	206	184
50	200	217	191
60	217	232	203
70	234	260	227
80	271	289	274
90	325	395	285
COMPUTED VALUES			
Geometric mean	200	223	203
95% Confidence limits of mean	192-208	199-248	183-226
Standard deviation of logs (% of mean)	6.8	6.7	4.7
Standard geometric deviation	1.54	1.44	1.39
Upper 90% confidence limit of 95th percentile	363	450	346

Using the level of total suspended particulate matter a statistical comparison was made between daily, weekly, and biweekly random sampling for 1956. The results of this comparison are presented in Table G. For reasons already noted statistical analysis was performed on the logarithms of observed values, thus mean concentrations are presented in the form of geometric means.

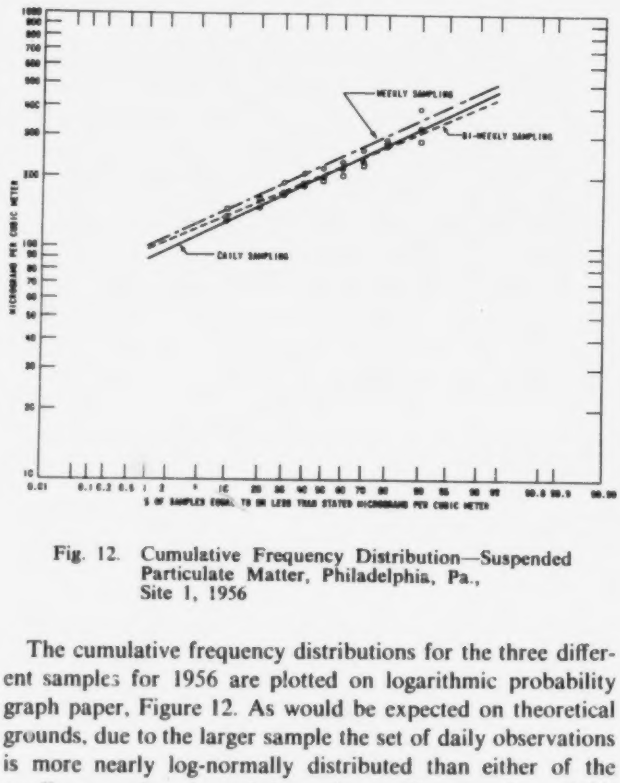

Fig. 12. Cumulative Frequency Distribution—Suspended Particulate Matter, Philadelphia, Pa., Site 1, 1956

The cumulative frequency distributions for the three different samples for 1956 are plotted on logarithmic probability graph paper, Figure 12. As would be expected on theoretical grounds, due to the larger sample the set of daily observations is more nearly log-normally distributed than either of the smaller samples; nevertheless, the smaller samples exhibit log-normal characteristics. Weekly sampling results in a higher estimate of the geometric mean concentration than does daily sampling, 223 compared to 200 $\mu g/m^3$ but the difference is not significant by a "t" test. Other sampling statistics, with the exception of the standard geometric deviation, were found to be higher for the weekly sample. Recalling that the weekly observations were always made on the same day of the week, it is probable that these results have been biased by daily variations in source strength. For example, if local sources emit greater quantities of particulate matter on

Tuesday (the day selected for this comparison) than on other days of the week, the results would depend largely on the day selected. A random method of selecting observations should at least tend to minimize this effect. The estimate of the true geometric mean computed from the 25 random observations was in this instance approximately equal to the estimate provided by daily sampling, 203 compared to 200μg/m^3. Likewise, other sampling statistics computed from the biweekly random sample, with the exception of the standard geometric deviation, were found to deviate only slightly from those computed for the daily sample.

Based on this rather limited comparison it would seem that weekly sampling (at least sampling on the same day of each week) is less desirable than random sampling, even though the latter be on a biweekly basis.

The above analysis was based upon a comparison of sampling methods for one year only. Conditions do not change so greatly from year to year to prohibit analysis of successive years of samples. Fortunately, a two year comparison of biweekly random and daily sampling was possible for Philadelphia for the years 1955-56. Results are presented in Table H and Figure 13. Estimates of the geometric mean concentration for the two sampling methods are 192 for biweekly random and 200 for daily sampling. The percentile values also agree quite well.

TABLE H. COMPARATIVE STATISTICS FOR DAILY AND RANDOM SAMPLING
SUSPENDED PARTICULATE

Site 1 Philadelphia, Pa.
1955 - 1956
(Concentrations in micrograms per cubic meter)

	Daily	Biweekly Random
OBSERVATIONS		
Number of samples	596	50
Minimum	56	56
Maximum	761	308
Percentiles—10	123	134
20	146	146
30	161	162
40	178	182
50	198	194
60	218	217
70	237	232
80	275	264
90	321	282
COMPUTED VALUES		
Geometric mean	200	192
95% Confidence limits of mean	194-206	175-211
Standard deviation of logs (% of mean)	6.8	6.4
Standard geometric deviation	1.43	1.40
Upper 90% confidence limit of 95th percentile	370	350

Another test of the reliability of a selective method of sampling is the ability to detect unusually high concentrations of particular contaminants. For this purpose the 95th percentile value (i.e. the concentration exceeded 5% of the time), is of particular interest. Toward this end the upper 90% confidence limit of the 95th percentile was computed using the 1955-1956 data following a method by Eisenhart, Hastay, and Wallis (12) which makes use of the sample mean and standard deviation. The limits were found to be 350 μg/m^3 for the biweekly random sample as compared to 370 for the larger daily sample; a difference of only 6%. Thus, one can say with 90% confidence, that under environmental conditions existing at sampling site 1 for 1955 and 1956, not more than 5% of the 24-hour total suspended particulate concentrations exceeded 350 μg/m^3 when calculated from 50 samples randomly selected.

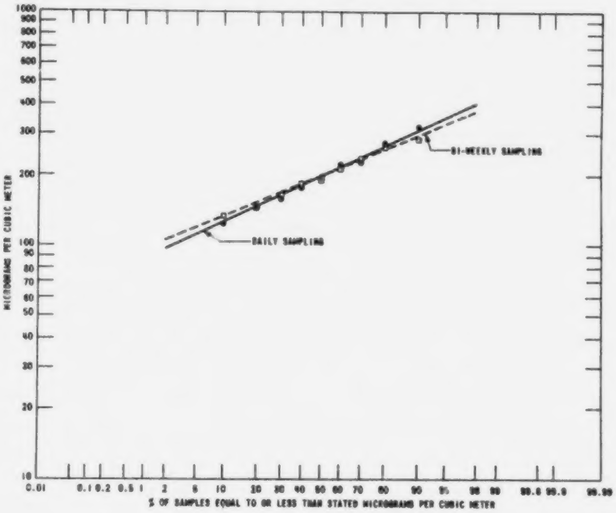

Fig. 13. Cumulative Frequency Distribution—Suspended Particulate Matter, Philadelphia, Pa., Site 1, 1955-1956

The Network is designed to show patterns of air pollution over a period of more than one year. For example, sampling over a four year interval would produce more than 100 samples which should yield data almost as valid as that obtained by daily sampling with over three times as many samples limited to any one year but which may have been somewhat abnormal as compared with other years. The probability of such abnormality influencing the results of sampling decreases as the number of years data included increases. Grouping data in this manner is valid as long as there are no substantial changes in source strength.

Considering the objectives of the Network, it is therefore concluded that sufficiently reliable measures of air pollution in a specific area may be obtained by sampling on a limited random basis and that the additional accuracy to be gained by daily sampling is not sufficient to justify the increased operating costs.

ANALYTICAL METHODS

SAMPLES

Twenty-four hour samples of suspended particulate matter are collected on weighed 8 x 10 inch flash fired glass fiber filters using a high volume sampler designed for this type of filter medium. The samples are equilibrated overnight at 75° F and 50% R.H. The filters are then weighed to the nearest milligram. The total volume of air filtered is determined by multiplying the sampling time in minutes by the average sampling rate in cubic meters per minute, this sampling rate being taken as the average of the initial and final flow rates. The weight of the sample in micrograms divided by volume of air in cubic meters gives the suspended particulate level in $\mu g/m^3$.

Preparation for chemical analysis (Fig. 14)

A First cut sample into halves, one of which is set aside for the extraction of organic matter.

B. Trim the edges from the second half.

C. Using a die 1¾" in diameter, cut out six circles from the trimmed half sample. The remainder, which represents 26% of the original sample, may be used for the spectrographic determination of metals.

D. The circles, each of which represents 4% of the original sample, are used as follows: Two circles are extracted and used for the determination of sulfates, nitrates and pH. The remaining circles may be used for the determination of fluorides, arsenic, ammonia, etc.

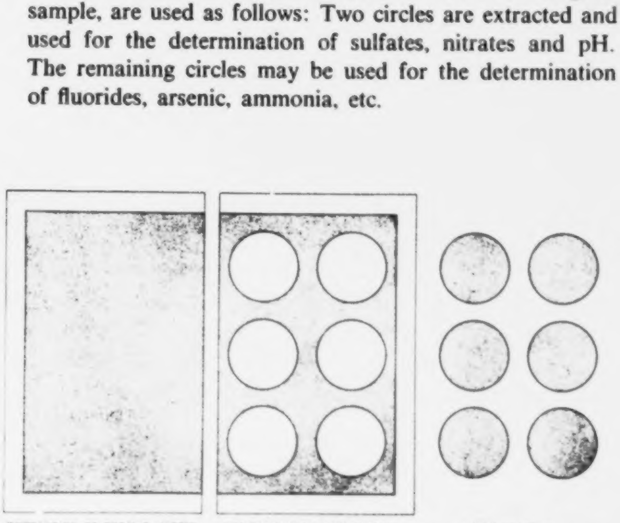
EXTRACTION OF ORGANIC MATTER
SPECTROGRAPHIC DETERMINATION OF METALS
DETERMINATION OF SULFATES, NITRATES, FLUORIDES, ETC

Fig. 14. Division of Sample for Analysis

RADIOACTIVITY

From October 1953 to May 1957 radioactivity measurements (13, 14) were made by counting a 1¾ inch circle from each filter in an internal proportional counter. The circle, cut at random from the filter, was placed in an aluminum counting dish, treated with conducting fluid (anstac) and, after drying overnight, counted for two four-minute periods.

Since May 1957 gross beta activity of the weighed sample has been measured using the entire 8 x 10 inch filter. The samples are counted after they are two days old to allow decay of the natural alpha and its associated beta-gamma activity. The samples are recounted after four to seven days to establish the decay in terms of apparent half-life of the radioactive materials. From these measurements, self-absorption and efficiency factors, the volume of air sampled, and the weight of dust collected, the gross beta activity in micromicrocuries per cubic meter of air on the date of sample collection and the decay rate expressed as the half-life beginning from the date of the first count, are determined.

Instrument

The counting apparatus consists of a proportion gas flow counting chamber and pre-amplifier (Nuclear Measurements Corporation Model PCC-12) having a thin (0.9 mg/cm^2) metal coated plastic window (Mylar), a conventional scaler (Nuclear-Chicago Model No. 181A Decade), and timer (Nuclear-Chicago Dual Timer Model T1). The piston of the counter chamber was replaced with a steel plate. The plate is covered with aluminum foil for ease of decontamination. The sample is placed on the plate which is 5 mm. below the thin-window.

Calibration

A. Calibrations for determining the plateau and instrument performance:

A sample of uranium oxide placed on a 2" diameter stainless steel planchet covered with 7 milligrams per square centimeter of aluminum foil to shield out alpha activity, was used as a secondary standard for determining the plateau and making daily calibrations. These calibrations were made three times a day to be assured that the instrument was performing properly. Including a background of 500 cpm the standard had an activity of 10,400 counts per minute. Sources of radium D+E plated on stainless steel and covered with 7 mg/cm^2 of aluminum foil as well as standard solutions of thallium-204 obtained from the National Bureau of Standards and deposited in counting pans are used as primary standards for determining counter efficiency of internal and thin-window proportional counters.

B. Initial determination of the counter efficiency.

A thin source of Tl^{204} having an area of 18.1 cm^2 was counted in an internal proportional counter having a geometry factor of 0.50 and a backscatter factor of 1.31 or an overall efficiency of 0.655 cpm per dpm. The same source centered

Preceding page blank

5 mm below the thin-window (7.5″ diam.) counted 86 per cent of the internal proportional counting rate, i.e. 0.86 x 0.655 or 0.563 cpm per dpm.

A point source of Tl^{201} (2 mm diam.) was counted at different radial positions directly under the center of the window and out to beyond the periphery of the window in four directions. The plotted results of these four sets of data indicated excellent agreement for a given radial distance but a diminution of the counting rate as the source approached the window periphery.

The results of these tests show the effective counting area to be only 41.9 square inches as compared to the total sample area of 63.0 square inches of sample. Thus the ratio of the effective counting area to the total sample area is 41.9/63.0= 0.665.

C. Filter absorption and self-absorption:

An estimation of the filter absorption was obtained from concurrent collections of air particulates on glass fiber filters and membrane filters with equal filtering rates. The membrane filters were ignited to remove the possibility of filter absorption while the glass fiber filters were treated with conducting fluid and air dried prior to counting both types of samples in an internal proportional counter. From 88.7 to 92.0 or an average of 90.3 percent of the membrane filter activity was recovered on glass fiber filters.

Due to the absorption of radiation by sample solids on the filter a self-absorption correction is made. The self-absorption correction factor is as follows:–1.04 for a 0 - .6 gm sample, 1.12 for a .6 - 1. gm sample, 1.22 for a 1. - 1.6 gm sample, and 1.36 for a 1.6 - 2.4 gm sample.

Counting Procedure

The chamber is pre-flushed at high rate with P-10 gas for about one hour. Proper flushing is ascertained by counting the background and a secondary standard to determine whether these have changed from the day before. Low background or standard counts indicate insufficient flushing and high background indicates contamination. Very little trouble due to contamination has been experienced, even though some of the samples appear to contain loose dust. This procedure is repeated at the end of the day or when all the day's samples have been counted.

The filter is placed on the plate of the counting chamber which is then placed in the proper position in the chamber. Two counts of two minutes each are taken. In the event the two counts do not agree, a third count is made. A similar count is made after a lapse of four to seven days.

Calculation of Radioactivity

A. To find the radioactivity of the sample:

1. Obtain the average gross counts per minute using the results of the two-minute counts.
2. Subtract the cpm of background from the average cpm of the sample to find average net cpm.
3. Correct for counting efficiency and filter absorption.
dpm = net cpm x 1/.563 x 1/.665 x 1/.903.
dpm = distintegrations per minute
1/.563 = correction for efficiency = 1/.86 x 1/.655
1/.665 = effective counting area correction
1/.903 = filter absorption factor
4. Convert dpm to $\mu\mu$ curies.
dpm/2.22 = total $\mu\mu c$
5. Correct for volume of air sampled.
$\mu\mu c/V = \mu\mu c/m^3$ (uncorr.)
V = volume of air sampled in cubic meters
6. Correct for self-absorption of sample.
$\mu\mu c/m^3$ (uncorr.) x Fs = $\mu\mu c/m^3$ (corr.)
Fs = self-absorption factor (see Section C under Calibration).

B. To find average half-life of radioactive isotopes in the sample:

1. On semi-log paper plot net cpm against counting date. The count is plotted on the log scale and the days between the two counts on the linear scale.
2. Draw a straight line through the two points.
3. Find the point on the line where the net cpm is one-half that found when the sample was first counted.
4. Drop a vertical line to the base. The number of days from the date of the first count to this point is the average half-life of the radioactive isotopes present in the sample.

C. To find radioactivity on date of sample collection:

Samples having an apparent half-life of less than ten days are corrected for decay to the date of collection by extrapolating a plot of the decay results on log-log paper. This extrapolation is based on the assumption that the Way-Wigner formula, AT^k = constant, is valid and an assumed date of bomb debris formation which provides values for k between 1.1 and 1.2. (Log-log plots of decay data of high level bomb debris usually follow the theoretical negative exponential decay rate of 1.2 rather closely, while low level or 10 or more day old activity have decay slopes less than 1.2 but rarely less than 1.0.) If the half-life is greater than ten days, the results of the two counts are plotted on semi-log paper and the activity of the sample determined by extrapolating back to the date of collection. The radioactivity data presented in Table 4 show activities on the date of sample collection determined in this manner.

An Estimate of the Reliability of the Radioactivity Data

This is somewhat variable depending on many factors, such as the age of the bomb debris when first counted, the number of days from collection to date of first count and the counting error which is a function of the counting rate. For bomb debris less than 5 days old and relatively high activity it is possible that the extrapolated value could be off by a factor of 2 because fractional parts of a day are not considered. For materials having an age of 10 days or more the determination should be within 10 percent of the correct value. For low activity in the order of 1000 cpm/sample, the raw counting error at the 95 percent confidence level may be estimated to be $1.96/2\ (1500 + 500)^{\frac{1}{2}} = 44$ cpm or 4.4 percent, whereas the error of a sample counting 500 cpm or equal to the background would be $1.96/2\ (1000 + 500)^{\frac{1}{2}} = 38$ cpm or 7.6 percent.

ORGANIC MATERIALS

Selection of a Solvent for Removing Organic Matter

Several solvents have been used for removing organic materials from air particulate samples. The choice of solvent is determined by the interest of the individual investigator. Extraction with acetone will result in the removal of more organic matter from the sample than would the extraction with benzene, cyclohexane, ethyl ether, chloroform, etc., but the extracted material will not completely redissolve in any one solvent. Benzene and cyclohexane extracts redissolve readily and are well suited for infrared examination. Polycyclic compounds are effectively removed by benzene or cyclohexane extraction. Chloroform is a very satisfactory solvent which removes only slightly less material than acetone. When using acetone or ethanol, considerable inorganic material will also be removed. This is a disadvantage and must be considered when choosing a solvent. No single solvent will remove all of the organic materials from the filter.

From 1953 through June, 1955, acetone was used to remove the organic materials from all samples. The major interest during that time was in the determination of atmospheric protein levels. Use of acetone as a solvent resulted in the removal of maximum amounts of non-protein materials which could have interfered with the protein measurement. The extracts obtained by this procedure were difficult to handle when used for further chemical studies, and also contained considerable inorganic matter. Therefore, the use of this solvent was discontinued at the end of the protein study. Since July 1, 1955, all samples have been extracted with redistilled benzene which, while it does not remove all of the organic material present in the sample, does provide a more useful product for further analyses.

Benzene extraction is routinely carried out in a closed system at less than 80 degrees C liquid temperature. The residual benzene is routinely driven off in an oven at 60 degrees C. This procedure retains substances less volatile than benzene and rejects those more volatile. For selected samples where it is desired to retain substances more volatile than benzene, the substances are recovered chemically from the benzene at room temperature. It has been found that, apparently because of absorption on the particulates on the filter or on the filter fibers themselves, this latter technique recovers substances that would normally be expected to be volatile at air and filter temperatures at the time of collection, which temperatures in the southwest in summer can run as high as 50 degrees C.

Extraction of Organic Materials

A. Fold or roll the sample into a bundle to prevent loss of material during the extraction procedure and to allow it to be easily introduced into the extractor. Tie bundle with fine copper wire.

B. Place the sample in a Soxhlet extractor and extract with the desired solvent for a minimum of 7 hours. A 7 hour rapidly cycling extraction removes over 95% of the soluble materials.

C. Concentrate the extract to a small volume (5 ml.) by evaporation. This can be done by using a closed distillation system or simply by heating very cautiously on a hot plate in a well ventilated hood.

D. Filter the concentrated extract through a medium porocity Corning fritted filass filter into a weighed test tube or flask using a Fisher Filtrator or similar apparatus. Wash the original container and filter at least twice with small amounts of chloroform. Small volumes of chloroform efficiently remove the organic materials and prevent accumulation of organic matter in the filter which may clog the pores. This procedure enables one to filter several samples in sequence with no chance of contamination.

E. The remainder of the solvent is removed by heating in an oven maintained slightly below the boiling point of the solvent. All electrical controls of the oven must be outside the oven or an explosion may result due to sparking of the controls. The solvent may also be removed "in vac" but boiling may occur, resulting in loss of material.

F. Weigh the test tube after the last of the solvent has been removed.

Analysis of Organic Matter

Examination of the crude organic materials obtained by the above procedure by infrared spectroscopy often provides useful information. This material may also be used for subsequent fractionation and detailed analysis.

INORGANIC CONSTITUENTS

Approximately 750 samples collected in 1953 and 1954 were analyzed by the Kettering Laboratory of the University of Cincinnati Medical School. The following procedures were used:

Spectrographic Examination (15)

A portion of the sheet 6.3 square inches, or 10 percent of the area exposed to the air , was refluxed for 10 to 20 hours with 40 ml. of 1:1 nitric acid. The distintegrated glass fibers were filtered off and washed thoroughly with hot water. The filtrate was evaporated to small volume and was then adjusted with distilled water to the volume of 10 ml. in a glass-stoppered pyrex cylinder. Five ml. of this solution was removed to a second glass-stoppered pyrex cylinder, 1 ml. of a cobalt standard was added, and the volume was adjusted to 10 ml. with distilled water. This solution was subjected to flame spectrography for the determination of magnesium, copper, sodium, iron, maganese, potassium, and strontium. This method was used for copper only when high concentrations of the metal were present. One ml. of the remainder of the 10 ml. volume of solution originally prepared was then mixed with 1 ml. of a spectroscopic buffer salt solution. The mixture was evaporated to the volume of 1 ml., 0.2 ml. portions in duplicate were introduced into the craters of purified graphite electrodes and were burned in a d.c. arc for the spectrographic determination of lead, tin, vanadium, titanium, silver, and copper. The solution which remained after the sample had been prepared for spectrographic analysis was retained for purposes of checking the result, if necessary.

Sulfate

A portion of the filter (1.5 square inches in area, or 2.4 percent of the total area) was boiled with dilute nitric acid and bromine water. The total quantity of sulfate was determined from a turbidimetric measurement of the quantity of sulfate that was precipitated by the addition of barium chloride to the filtered solution.

Nitrate and Chloride

Another 1.5 square inch section of the sheet was refluxed with 20 ml. of water for 1 hour. The solution was filtered and a portion of the filtrate was used for the determination of its content of nitrate by the 2-4 xylenol method (16). A portion of the remaining solution was used to determine chloride content. The method was a turbidimetric one (17) in which the amount of silver chloride precipated by the addition of silver nitrate was measured.

Fluoride

A section of the sheet (5 square inches in area, or 7.9 percent of the exposed area) was used for the determination of fluoride. The piece was placed in a platinum dish covered with .50-1 gm. calcium hydroxide and, after heating to dryness, was ashed at 590° C. The mass was then distintegrated, and the fluorine was distilled from the sample according to the method described by Willard and Winter (18). The fluorine in the distillate was determined by the back-titration technique using standardized solutions of alizarin, thorium nitrate, and sodium fluoride, as recommended by Dahle, Bonnar, and Wichmann (19).

Asenic

A portion of the sheet (5 square inches, or 7.9 percent of the exposed area) was analyzed for arsenic by a polargraphic method (20).

Beryllium

A separate piece of the filter (6.3 square inches, or 10 percent of the effective area) was digested with sulfuric acid and hydrogen fluoride, until the silicate was decomposed. The soluble residue which remained was then analyzed for beryllium, spectrographically (21).

* * * * *

Since July, 1955, all analyses for inorganic constituents have been carried out by Network laboratory personnel using the following procedures:

Water Soluble Constituents

A. Extraction of water soluble materials from the sample

1. Place an 8% aliquot (2 1¾" circles) of the air particulate sample in a 125 ml. flask, add 50 ml. distilled water.
2. Reflux 1½ hours. Cool.
3. Filter through Whatman No. 1 paper.
4. Repeat the extraction using 10-15 ml. water and heating only a few minutes without a condenser.
5. Filter the solution through the same filter washing the flask and filter until the total volume of filtrate is 80 ml. Mix the filtrate thoroughly. Store in a clean rubber stoppered bottle.
6. This solution may be used for the determination of chlorides, nitrates, sulfates, pH and other water soluble materials. Each ml. of the solution is equivalent to .1% of the sample.

Note: A 4% aliquot of the sample may be extracted giving a final volume of 40 ml.

B. Sulfates

1. Reagents.
    a. 10 N hydrochloric acid: Dilute 80 ml. of concentrated acid to 100 ml. with distilled water.
    b. Glycerine—alcohol solution: Mix 1 volume of glycerine with 2 volumes of 95% ethanol.
    c. Barium chloride crystals. High quality 20-30 mesh crystals.
    d. Standard sulfate. Any high grade soluble sulfate may be used.
2. Calibration.
    a. Prepare a stock sulfate solution using a dry sulfate of high quality.
    b. From the stock solution prepare working standards equivalent to 100, 300, 500, 700 and 1000 μg sulfate per 10 ml. of solution.
    c. Pipette replicate 10 ml. portions of each standard into graduates or test tubes graduated at 25 ml.
    d. Follow the procedure outlined below starting at step b of 3. All readings should be made against a reagent blank. Repeat the calibration until a satisfactory calibration curve is obtained.
    e. Plot percent transmittance against amount of sulfate on semi-log paper.
3. Analytical procedure.
    a. Transfer a 10 or 20 ml. aliquot of the water extract of the sample into a graduated cylinder or a test tube graduated at 25 ml. The size of the aliquot to be used has to be established by preliminary tests on samples from different locations.
    b. Add 1 ml. 10 N hydrochloric acid, 4 ml. of the glycerine-alcohol solution and dilute to 25 ml. if necessary. Mix thoroughly.
    c. Add approximately 0.25 gm. barium chloride crystals and mix until the crystals are dissolved.
    d. Allow to stand 40 minutes.
    e. Read in a spectrophotometer at 500 mμ against a reagent blank. Any spectrophotometer accommodating cuvettes with a light path of 25 to 50 mm. should be satisfactory.
    f. Determine the sulfate content of the sample by referring to the calibration curve.

C. Nitrates.

1. Reagents.
    a. Xylenol reagent: 1 percent by volume of 2-4 xylenol in glacial acetic acid.
    b. Sulfuric acid 85 percent: add 485 ml. of concentrated sulfuric acid with care to 117 ml. of water.
    c. Sodium hydroxide: .4N solution.

2. Calibration.

   a. Prepare a stock nitrate solution containing 100 mgms. of nitrate per liter. (163 mgms. KNO_3 per liter.)

   b. Prepare working standards containing 10, 20, 40, 60, 80 and 100 μg per 5 ml. by properly diluting the stock solution.

   c. Pipette 5 ml. portions of the working standards into test tubes and add 15 ml. of 85% sulfuric acid solution. Mix and cool.

   d. Proceed as outlined below starting at step b of 3.

   e. Read the transmittance of the solution at 435 mμ agent a reagent blank.

   f. Plot percent transmittance against amount of nitrate on semi-log paper.

3. Analytical procedure.

   a. To a 2 ml. aliquot of the water extract of the sample in a 25 mm. test tube add 3 ml. of water and 15 ml. of 85% sulfuric acid. Mix and allow to cool. If the nitrate level is low, 5 ml. of the extract should be used. Omit the 3 ml. of water in this case.

   b. Add 1 ml. of the xylenol reagent. Mix.

   c. Heat in a 60° water bath for 30 minutes. Cool.

   d. Transfer the contents of the tube to a 250 ml. separatory funnel, rinsing the tube with distilled water. A total of 80 ml. of water should be added to the separatory funnel.

   e. Add 10 ml. of toluene to the separatory funnel. Shake fairly vigorously for at least 2 minutes. A standard shaking procedure should be adopted to insure consistent results. Too vigorous shaking must be avoided to prevent emulsification.

   f. Allow to stand for 15 minutes, then run off and discard the lower layer.

   g. Wash the toluene with 20-25 ml. of water, shake gently and allow to settle for a few minutes.

   h. Completely run off the lower layer and discard.

   i. Add 10 ml. of .4 N sodium hydroxide solution and shake gently for 5 minutes.

   j. Allow to stand until the lower layer becomes clear, then filter the lower layer through Whatman No. 1 paper into a clean and dry cuvette.

   k. Read the transmittance of the solution at 435 mμ against a reagent blank prepared in the same manner.

   l. Obtain the concentration of nitrates in the sample by referring to the calibration curve.

D. Chlorides.

Filters supplied since mid-1956 contain a large amount of chlorides, thereby making it impossible to carry out a determination of chlorides in the particulate samples collected on these filters.

Bromide, iodide, thiocyanate, cyanide, ferrocyanide, ferricyanide, sulfide and thiosulfate ions interfere in this determination by precipating as silver salts.

1. Reagents.

   a. 3% para-nitrophenol in 95% ethanol.

   b. N Nitric acid.

   c. Sodium or potassium chloride for standards.

   d. Silver nitrate reagent: 1 gm. silver nitrate dissolved in 20 ml. distilled water, add 1 ml. nitric acid, then dilute to 100 ml. Store in a dark bottle.

2. Calibration.

   a. Prepare a stock chloride solution using a dry sample of either pure sodium or potassium chloride. .210 gms. of KCl/1 is equivalent to 100 μg. chloride/ml.

   b. Prepare a set of working standards containing 20, 50, 100, and 200 μg per 20 ml. by properly diluting the stock solution.

   c. Follow the procedure outlined in 3 below using replicate samples of each of the standards prepared. Repeat if necessary to give adequate precision.

   d. Plot percent transmittance against amount of chloride on semi-log paper.

3. Analytical procedure.

   a. To 20 ml. of the water extract of the sample add 1 drop of the p-nitrophenol solution.

   b. Add N nitric acid drop by drop until the solution becomes colorless.

   c. Overlay with 2 ml. silver nitrate reagent.

   d. Dilute to 25 ml. with distilled water.

   e. Stopper and mix by inversion 6 times.

   f. Allow to stand exactly 30 minutes, then read in a spectrophotometer at 500 mμ against a reagent blank. The solution should be stored in the dark for the 30 minute period and the spectrophotometric measurement should be carried out in a dimly lighted room in order to avoid reduction of the silver chloride by bright light.

   g. Determine the amount of chloride in the sample by referring to the standard curve.

Metals—Spectrographic Method

A. Standardization.

Prepare a stock standard solution containing 2 μg each of Sb, Be, Bi, Cd, Cr, Co, Ni, and V; 4 μg Sn; 8 μg Ba, Mo, and Ti; 16 μg Cu and Mn; 48 μg Zn; 72 μg Pb, and 128 μg Fe in 0.05 ml. of solution from ACS, or better, grade salts. Working standards are made by diluting the stock solution to give concentrations ½, ¼, 1/8 . . . 1/256 of the original. Stronger standards are made by placing multiples of 0.05 ml. of the standard solution on the electrode. A nitric acid extract of the glass filter is incorporated in the working standard solutions in order to duplicate the conditions in the solutions obtained from the particulate samples. In this way, compensation is made for acid soluble materials present in the glass filter some of which would interfere in the metal analysis. By following this procedure the need for making separate corrections for metals present in the filter is eliminated.

For the preparation of a standard plate, electrodes (V-crater with center post) are loaded with one or more 0.05 ml. portions of a working standard solution and then dried for one hour in a 105° C oven. The loaded electrodes are arced at 7 amp. d.c. for 30 seconds, using a Baird 3-meter grating spectrograph. A single step-sector, passing 1/8 of the uninterrupted beam, is interposed between the arc and the spectrograph. Use of this sector proved to be invaluable as it provided an 8-fold increase in range as well as a spectrogram with much lower background. Eastman 103-0 plates are used, and a single region 2170 A.-3590 A. recorded. The plates are processed by standard procedures. It is possible to find satisfactory analysis lines for all 17 metals within this single region. A standard plate equivalent to 1/256 to 8 times the concentration of the stock solution was adequate to cover the ranges of concentrations of the metals encountered. The intensities of the analysis lines of the metals on the standard plate are measured with use of the Jarrell-Ash densitometer and a calibration curve of line intensity vs. metal concentration prepared for each metal.

B. Preparation and evaluation of sample spectrograms.

To permit more complete removal of inorganic materials than is possible by simple acid extraction, samples (26% of the original) are first muffled at 500° C for one hour to burn off organic matter before they are extracted twice with 40 ml. portions of 1-1 nitric acid at slightly below the boiling point for one hour. After the resulting solutions are filtered through Whatman No. 42 filter paper, they are evaporated to 3-4 ml. and then made up to 10.4 ml. The electrodes are loaded with 0.05 ml. of solution and then dried in an oven at 105° C. The loaded electrodes are arced at 7 amp. d.c. for 30 seconds in the spectrograph. A single step-sector, passing 1/8 of the uninterrupted beam, is interposed between the arc and the spectrograph. Twelve sample spectrograms are recorded on each plate. Analysis lines of the sample spectrograms are evaluated by means of the densitometer and the metal content of the sample obtained from the calibration curve.

The above procedure was used for the analysis of samples collected prior to January 1, 1957. Since that date samples have been collected on a new filter having different chemical and physical properties. Due to the lowered solubility of the filter in the nitric acid used in the processing of the sample it was necessary to slightly modify the procedure by filling the electrode crater one-third full of a LiCl-graphite mixture (1 part LiCl and 2½ parts graphite) prior to arcing to provide a more uniform burning of the sample.

A COMPARISON

It is interesting to contrast the National Air Sampling Network with the somewhat older and more complex volunteer network of air pollution measuring stations in Great Britain (22, 23) which for years have reported their results in uniform manner to the Fuel Research Station of the Department of Scientific and Industrial Research. The similarities and differences of the two national networks merit examination and explanation.

As of the end of 1957, both networks involved about 250 cooperating agencies. In the United States, each agency in general operates only one sampling site as part of the Network, whereas in Britain, each agency operates an average of four sampling sites as its part of the national network. In the United States network, there has been in use up to now, only one unit of sampling equipment at each sampling site—a suspended particulate matter filter. In Britain, each site has at least two units of equipment, most generally a deposit gauge for settleable solids and a device for integrated monthly measurement of sulfur dioxide. At about fifteen percent of the sites, equipment is also available for measurement of daily smoke and sulfur dioxide levels.

It is noted, however, that the United States network filter samples are being measured for blackness, so that the equivalent of the British smoke filter data is being obtained at all stations in the United States. A gas sampler for sulfur dioxide and other gases is under development for network use. At present it is not contempated that deposit gauges will be used at United States network stations.

In Britain, the equipment and laboratory services are provided by the local agencies operating the sampling site. In the United States network, prior to 1958, all samplers and laboratory analyses were provided by the Community Air Pollution Program, Robert A. Taft Sanitary Engineering Center, Public Health Service. The first move toward British practice in the United States occurred this year: The New York State Department of Health has taken over complete responsibility for providing equipment and analyses for sampling sites in that state. The state health departments of Washington and Maryland have also set up small scale network operations. Data from these state networks will be incorporated in consolidated reports such as this one.

In the United States network, results of sample analyses are furnished to the agency doing the sampling and also to the air pollution agency of the state in which the sampling site is located, at the end of each three-month period. In Britain, consolidated reports for all stations are prepared on a monthly basis and furnished to all stations. Most of the British network stations collect integrated samples for a period of a month. A smaller number take average daily samples, but such stations report their results each month only as monthly average and highest daily average. One 24-hour sample is taken every two weeks at each site in the United States network. A more detailed chemical analysis is made than in Britain, and the actual results obtained are reported. The form of consolidated report represented by this publication differs from that used periodically for this purpose by our British counterparts because of the differences in data being consolidated.

An integral part of the United States network is a group of 51 nonurban sites to serve as control or background sites. There is no comparable group in the British network which is separately identifiable. The United States network, for which practically all analytical work is done in a central laboratory, must limit urban stations to the number that can be handled by the laboratory, and in order to get the best possible geographical coverage over a large country, to use only one station per city. In the British network, most cities operate and analyze samples from a number of sampling sites, there being 166 sites in the Greater London area alone operated by the several dozen administrative municipal bodies in this 100 square mile area. As yet, no city in the United States operates a similar network which merges its data with that of the national network in the same way that Greater London data are merged into those of the British network.

It is noted in conclusion that the British network has been operating since 1927. Many of their cities have been harder hit by air pollution than American cities, so that the incentive there has been greater; and lastly, the United States network covers a vastly larger land area and population than its British counterpart.

It is hoped that the states and cities in this country during the next several years will establish, on a basis compatible with the present network, state and local networks of sampling stations around the admittedly sparse matrix of stations now being operated.

ACKNOWLEDGEMENTS

In the early days of the Network operation, Dr. Leslie A. Chambers, Director of Research of the Sanitary Engineering Center, now Director of Research of the Los Angeles County Air Pollution Control District, foresaw the significance of air pollution data being collected from a few stations for other purposes, and visualized the establishment of the national air quality grid. During this formative period, the field operation was handled by Dr. Milton J. Foter, now Chief of Food Microbiology, Milk and Food Program, Robert A. Taft Sanitary Engineering Center. Chemical analyses for inorganic pollutants during these years were performed by the Kettering Laboratory of the University of Cincinnati, under the supervision of Mr. Jacob Cholak, Associate Professor of Industrial Health.

With the passage of Public Law 159 (the Federal Air Pollution Research and Technical Assistance Act) in 1955, the Network was incorporated into the Air Pollution Program under the supervision of Mr. Arthur C. Stern, who developed the master plan for the conduct of the Network which was put into effect in January, 1957, and under which the Network is currently operating. The random sampling method was developed by Dr. E. K. Harris, Chief Statistician, Robert A. Taft Sanitary Engineering Center.

The person responsible for the Public Health Service laboratory portion of the work from the beginning and Chief of the National Air Sampling Network Section since 1955, is Mr. Elbert C. Tabor. Since 1955, field operations have been the responsibility of Mr. Vernon R. Hanson. Laboratory operations have been supervised by Mr. Frank H. Davis since mid-1957. Radioactivity measurements are made under the direction of Dr. Lloyd R. Setter, of the Radiological Health Program of the Sanitary Engineering Center. Special mention is made of the contribution of Mr. Charles E. Zimmer, Analytical Statistician, who was responsible for the reduction and compilation of the data. In this work, he had the able assistance of Mr. Donald H. Fair.

Appreciation also is expressed for the excellent cooperation of state and territorial health and other agencies, various federal agencies, and the Public Health Service regional offices in setting up and maintaining the Network.

Particular mention must be made of the contribution to this project by the many local participating agencies throughout the United States whose conscientious operation of the sampling stations make this study possible.

Acknowledgement is made of the participation of the following individuals in the Network program during the period covered by this report: Mary Jo Albertz, Nancy Baldwin, Naomi Barkley, Carl Berry, Patricia Bezold, Patricia Brady, William Bumiller, Rubert Caldwell, John Chambers, Philip Drinker, Walter Elbert, Harold Faig, Frank Fox, Thomas Halloran, Samuel Halpern, June Hastings, Thomas Hauser, Carl High, William Hoffman, Dennis Holzschuh, Anna Hood, Shirley Irwin, Claude Johnson, Daniel Lamb, Robert Litzenberg, Robert McDonald, Betty McDowell, Joseph Majors, Eugene Martin, James Meeker, William Peart, John Pfaff, Alice Proulx, David Robinson, Ann Rutemiller, Kenneth Schatzle, John Spille, Ruth Umfleet, William Warren, Richard Werner, James Wood and Ruth Wheatley.

Preceding page blank

REFERENCES

(1) Stern, A. C. Application of Electronic Processing to Air Quality Data. Proc. Semi-Annual Technical Conference, Air Pollution Control Association, San Francisco, Cal., November 18-19, (1957).

(2) Stern, A. C. Manual on the National Air Sampling Network Program for the IBM 650 Computer. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. (1957).

(3) Chambers, L. A., Foter, M. J. and Cholak, J. A Comparison of Particulate Loadings in the Atmospheres of Certain American Cities. Proc. Third Nat'l Air Pollution Symposium, Pasadena, Cal., April 18-20, (1955).

(4) Chambers, L. A., Tabor, E. C. and Foter, M. J. The Characteristics and Distributions of Organic Substances in the Air of Some American Cities. A. M. A. Arch. Ind. Health, *16*, 17, (1957).

(5) Tabor, E. C. Hauser, T. R. Lodge, J. P. and Burttschell, R. H. Characteristics of the Organic Particulate Matter in the Atmosphere of Certain American Cities. A. M. A. Arch. Ind. Health, *17*, 58, (1958).

(6) Tabor, E. C. and Warren, W. V. Distribution of Certain Metals in the Atmosphere of Some American Cities. A. M. A. Arch. Ind. Health, *17*, 145, (1958).

(7) Stern, A. C. Results of Three Years of Operation of the National Air Sampling Network. J. Air Pollution Control Association, *7*, 284, (1958).

(8) Chambers, L. A., Tabor, E. C. and Foter, M. J. Protein Content of the Atmosphere. Technical Report, A58-9, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, (1958).

(9) Silverman, L. and Viles, F. J. A High Volume Air Sampling and Filter Weighing Method for Certain Aerosols. J. Ind. Hyg. and Tox. *30*, 124, (1948).

(10) Chambers, L. A. Filter Media for Air Sampling. Amer. Ind. Hyg. Association Quarterly, *15*, 4, (1954).

(11) Harris, E. K. and Tabor, E. C. Statistical Considerations Related to the Planning and Operation of a National Air Sampling Network, Proc. 49th Annual Meeting, Air Pollution Control Association, Buffalo, N. Y., 35-1, (1956).

(12) Eisenhart, Hastay, and Wallis. Techniques of Statistical Analysis. McGraw-Hill, (1947).

(13) Setter, L. R., Hagee, G. R. and Straub, C. P. Analysis of Radioactivity in Surface Waters—Practical Laboratory Methods. ASTM Bulletin, 227, 35, (1958).

(14) Nader, J. S., Hagee, G. R. and Setter, L. R. Evaluating the Performance of the Internal Counter. Nucleonics, *12*, 29, (1954).

(15) Cholak, J. and Hubbard, D. M. Spectrochemical Analysis with the Air-Acetylene Flame. Ind. Eng. Chem., Anal. Ed. *16*, 728, (1944).

(16) Barnes, H. A Modified 2:4-xylenol Method for Nitrate Estimations. Analyst *75*, 388, (1950).

(17) Luce, E. N., Denice, E. C. and Akerlund, F. E. Turbidimetric Determination of Small Amounts of Chlorides. Ind. Eng. Chem., Anal. Ed. *15*, 365, (1943).

(18) Willard, H. H. and Winter, O. B. Volumetric Method for the Determination of Fluoride. Ind. Eng. Chem., Anal. Ed. *5*, 7, (1933).

(19) Dahle, D., Bonnar, R. U. and Wichmann, H. J. Titration of Small Quantities of Fluorides with Thorium Nitrate. I. Effect of Changes in the Amount of Indicator and Acidity. J. Assoc. Offic. Agr. Chemists, *21*, 459, (1938).

(20) Bambach, K. Polarographic Determination of Arsenic in Biological Material. Ind. Eng. Chem., Anal. Ed. *14*, 265, (1952).

(21) Cholak, J. and Hubbard, D. M. Spectrochemical Determination of Beryllium. Increased Sensitivity of Detection in the Cathode Layer. Anal. Chem., *20*, 970, (1948).

(22) Department of Scientific and Industrial Research. The Investigation of Atmospheric Pollution. Reports on Observations, 1927—. H. M. Stationery Office, London.

(23) Department of Scientific and Industrial Research. Atmospheric Pollution Bulletin. Monthly Summary of Observations and Abstracts, 1933—. Fuel Research Station, Greenwich, London.

U. S. GOVERNMENT PRINTING OFFICE : 1959 O - [illegible]